APRIL 1952

FIREMEN

FIFTY-SIXTH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

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No Water for Fire Fighting
(See page 2)

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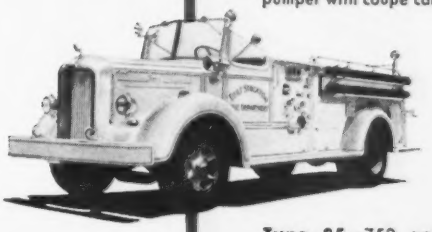
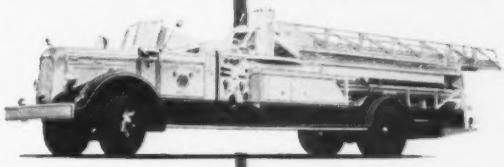


Type 85—750 gpm triple combination pumper with semi-cab.

Type 95—1,000 gpm triple combination pumper with canopy cab.



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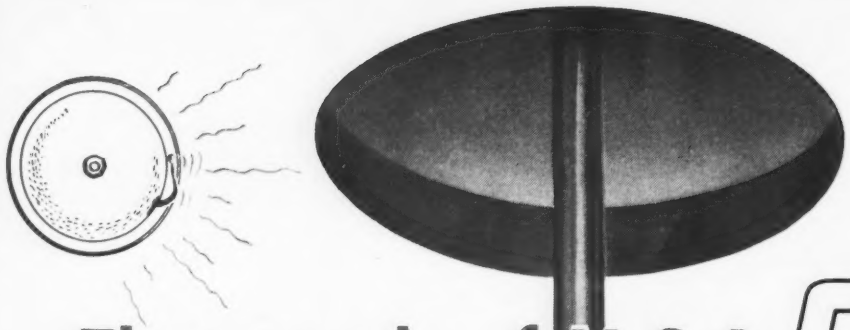

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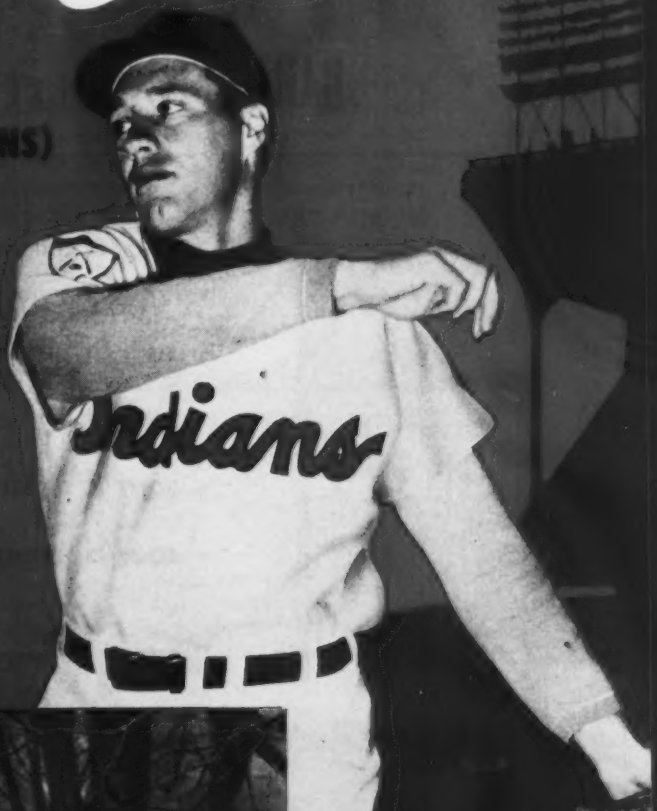

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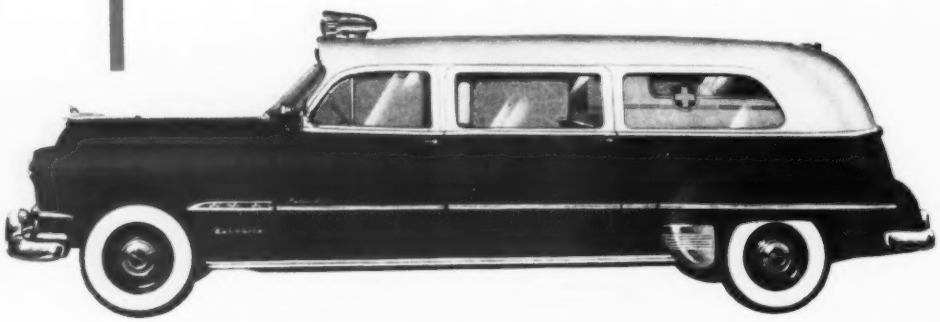

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PERFORMANCE

Properties protected by ADT during 1951 experienced a remarkably high immunity from fire and burglary losses. The impressive figures given below are typical of the records established year after year. They furnish convincing proof of the exceptional value of ADT Central Station Electric Protection Services.

Performance of this type can only be obtained through continuous supervision, regular inspections and tests, and complete maintenance of protective signaling systems. Such specialized attention, as provided by ADT, is vitally important to assure effective operation when emergencies arise.

Write for illustrated booklet, "Protecting Life and Property," describing all ADT Protection Services.

1951

SPRINKLER SUPERVISORY AND WATERFLOW ALARM SERVICE

Supervisory alarms, indicating temporary impairment of sprinkler systems	183,330
Waterflow alarms, caused by fires or serious leaks	3,580
Manual fire alarms	138
Insurable values of properties protected	$9,552,857,000
Ratio of losses to insurable values protected	4/100th of 1%
Fire-loss immunity in 1951	99 96/100 %
AVERAGE FIRE-LOSS IMMUNITY DURING THE PAST TEN YEARS	**99 97/100 %**

WATCHMAN'S REPORTING AND MANUAL FIRE ALARM SERVICE

Investigations of failures of watchmen to signal Central Stations on schedule	214,449
Total number of signals recorded	334,615,176
Watchmen's patrol efficiency	99 94/100th %
Alarms from Manual Fire Alarm Boxes	1,393
Insurable values of properties protected	$15,177,188,000
Ratio of fire losses to insurable values protected	8/100ths of 1%
Fire-loss immunity in 1951	99 92/100 %
AVERAGE FIRE-LOSS IMMUNITY DURING THE PAST TEN YEARS	**99 96/100 %**

BURGLAR AND HOLDUP ALARM SERVICES

Attacks on ADT Protection	1,907
Entrances effected	1,046
Captures as result of burglar, holdup and other emergency alarms	680
Insurable values of properties protected	$2,881,400,000*
Ratio of losses to insurable values protected	1/100th of 1%
Burglary-loss immunity in 1951	99 99/100 %
AVERAGE BURGLARY-LOSS IMMUNITY DURING THE PAST TEN YEARS	**99 99/100 %**

*Not including the ADT-protected values in bank vaults, the U.S. Treasury, Federal Reserve Banks and branches, the U.S. Mints, and the U.S. Bullion Depositories at Fort Knox, Ky., and West Point, N. Y.

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New Dodge Fire Truck of the West End Fire Co., No. 2, Quakertown, Pa., made by Harwick Mfg. Co., West Point, Pa., and equipped with the new Hannay Hose Reels.

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Firemen

Volume 19 Number 4

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PAUL R. LYONS, ASSOCIATE EDITOR
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A VOLUNTARY NON-PROFIT ORGANIZATION
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United Press Photo

Cover Photo

The two disconsolate fire fighters on this month's cover (*United Press Photo*) are experiencing the sense of frustration that develops when a building burns and there is no water for fire fighting. The incident occurred at the Elwyn Training School for mentally retarded children, Elwyn, Pennsylvania, on February 20. The unsprinklered 4-story brick building above was destroyed by fire believed to have been started by one of the inmates. Volunteer fire fighters responding to the alarm had very little water supply since six standpipe valves had been left open, resulting in a complete loss of pressure to yard hydrants. An elderly guardian lost her life when she returned to her room after the fire had started Total damage was estimated at $400,000.

Firemen Plan Memorial Library

Volunteer firemen of Mt. Rainier, Maryland, are soliciting funds for a memorial public library in memory of the late Chief Karl A. "Chick" Young who headed the department for 25 years before his death last November. A story about Chief Young and the Mt. Rainier Department appeared in FIREMEN for December, 1950, page 15. Chief Young headed the communications committee that established the Prince Georges County Fire Alarm Board the first of its kind in the United States. (FIREMEN for June, 1950, page 16.) The Fire Board dispatches the fire apparatus and ambulances of 28 volunteer fire departments using direct lines and radio. Chief Young also served as a state fire school instructor and assisted in the drill work in connection with the pictorial training manuals "Handling Hose" and "Handling Ladders" published by NFPA.

Chief William Freeman, elected to succeed Chief Young in command of the Mt. Rainier Volunteer Fire Department, carries on the very high traditions of the volunteer fire service. At the department's annual banquet on February 21, 43 active volunteer firemen attending reported a total of 552 years of volunteer unpaid fire service for the community.

The Mt. Rainier Department suffered its second recent major loss on February 25th when beloved Chaplain and Financial Secretary David Lang, 84, a volunteer fireman for 41 years, died only four days after the annual installation at which he gave the invocation. All of this points to the importance of recruiting and training young fire fighters willing and anxious to keep up this vital community service.

NFPA Annual Meeting

The 56th Annual Meeting of the NFPA will be held in New York City, June 9–13 Indications are that this will be one of the most active meetings in the history of the Association. A tentative program has been prepared and was outlined in the March issue of the NFPA *Fire News*.

Some of the sessions already announced include committee reports and addresses on Municipal and Rural Fire Protection, Transportation Fire Problems, Aviation and Airport Fire Protection, Flammable Liquids and Gases, Structural Fire Safety, and an all-day program on industrial fire problems. This latter will be of special interest to industrial fire safety people and others concerned with manufacturing fire problems.

A local committee under the chairmanship of NFPA Member Edward J. Kehoe is preparing an extra-curricular program of entertainment features including sight-seeing and visits to radio and TV programs.

The Hotel Statler will be the headquarters of the meeting and all formal sessions will be held there. Additional accommodations will be available at the Martinique, headquarters for many fire chiefs' clubs and organizations; the McAlpin; the New Yorker; and others. Complete hotel information and reservation cards will be sent with the April issue of NFPA *Fire News*.

Fire fighters in uniform may attend these important sessions on fire protection without charge. A full outline of the scheduled program for the Annual Meeting will be presented in a forthcoming issue of FIREMEN.

Forest and Range Fire Control Program in Alaska

THE Bureau of Land Management of the U. S. Department of the Interior is responsible for fire control on 225 million acres in Alaska, 125 million acres of which support an estimated timber volume of 700 million cords or the equivalent of 350 billion board feet. After severe and repeated burning, the site often becomes so deteriorated that it may take 300 years or more for natural reforestation.

Furs, fish and game constitute some of Alaska's richest resources. Wild fires destroy game habitat, alter migratory routes, disrupt the continuity of stream flow and adversely affect normal population fluctuations over long periods of time.

The scenic and recreational resources attract so much income to the Territory that they may actually have greater economic value than most of the other resources combined. Unfortunately the scars of millions of acres of charred wasteland and brush lands detract considerably from some of the most inspiring scenery found anywhere under the flag of the United States.

Prior to 1939, when organized protection was established in Alaska, it was not uncommon to have an annual burned area of from 3 to 8 million acres. Eighty percent of the Public Domain lands have been burned at least once since the gold rush days. With this rapid despoiling of the forest and other vegetation, it is imperative for the future economy of Alaska to protect what is left of these resources and to undertake measures for their restoration on denuded areas.

Difficulties of Fire Control

DURING the last ten years, the population of Alaska has increased from 72,500 to 126,700, or 75 percent. The accompanying development involves the clearing of land, the disposal of debris, the building of roads and increased use of public lands by loggers, sportsmen, farmers, and the military. These activities result in a severe increase in the danger from man-caused fires.

It is in these developing areas along growing road systems of more than 3,000 miles that the present fire control program is concentrated. In addition the use of airplanes makes accessible remote areas in the vicinity of innumerable lakes. Although military personnel and residents are available for service in suppression on the 25 million acres now receiving active protection, limited funds prevent the maintenance of the essential minimum of trained permanent personnel to establish continuity of organization and to provide supervisory overhead on large fires.

CONDITIONS created by climate such as permafrost, the deep humus, peat, and the overlying deep blanket of sphagnum moss make certain fire control problems peculiar to Alaska. The difficulty of foot travel requires that manpower be transported within a short distance from each fire. By the use of amphibian planes, it is often possible to land personnel on lakes within short walking distance of fires. The increasing use of the helicopter will provide a means of getting men to fires that are inaccessible by other means of transportation.

While fires may travel rapidly on the dry surface, the underlying peat and moss burn with a smoldering fire that requires thorough soaking with water to extinguish it. Lightweight pumps and hose and the almost universal availability of water make this method practical. Wherever smoldering ground fire conditions prevail, long continued patrols are necessary to detect and suppress the numerous flare-ups which occur along the margins of fires considered under control.

In areas near roads, heavy crawler tractors, with dozer blades working in pairs for safety reasons, are the most effective equipment for building fire lines. The bulldozers can clear the moss blanket and underlying peat down to permafrost, knock down trees, push all material to one side, and get back over the soft, spongy fire line after the permafrost has melted. This soggy trench makes a very effective fire break.

What Needs to be Done

The Bureau of Land Management has set forth basic needs of an adequate fire control program for Alaska — dependent on available funds and personnel.

ORGANIZATION — The area in Alaska in need of fire protection has been divided into six forest districts. At present, two of these have no permanent district organization, and only the two districts including the populated areas around Anchorage and Fairbanks approach adequate manning. In addition to the complete staffing of the other districts with permanent personnel, these two districts should be reorganized into five smaller districts. This will insure more effective administration and better fire control in those areas presently handled by temporary personnel.

There is also need for regional operating bases at Anchorage and Fairbanks that would maintain reserves of airplanes, tractors, trucks and other equipment.

CAPITAL IMPROVEMENTS — Warehouses, hangars, crew houses, and service buildings are needed to enable efficient operations on the districts. Suitable residences must be provided so that personnel will be willing to accept assignment to the more remote station.

EQUIPMENT — The Districts are gradually acquiring a supply of pumps and hand tools and automotive equipment. There is serious need for better radio equipment, additional airplanes, of the amphibian type, four-wheel drive trucks, dozer equipped tractors of the D-8 size or larger, low-boy trailers for hauling the tractors to fires and a helicopter or two to be stationed at the central operating bases as funds permit.

RECREATION — Increased tourist use is raising the number of man-caused fires resulting from carelessness with campfires. Promiscuous camping anywhere along travel routes by large numbers of people who are not conscious of fire danger greatly increases the risk of devastating fires in areas where resource values are highest and protection of greatest importance. This problem will be accentuated as Alaska becomes more widely known and accessible to more extensive travel.

"Dad wants you to come in this way." Driver learns location of fire and can spot his truck for prompt attack.

Utilizing Water for Fighting Farm Fires

By Norton T. Ames, Member of NFPA Committee on Farm Fire Protection and a member of the Oregon, Wisconsin, Volunteer Fire Department

Photos through courtesy of Mr. Hermanson, General Manager, Blaney Hybrid Seed Corn Farms

THE Oregon, Wisconsin, Volunteer Fire Department has developed an evolution for utilizing three sources of water for fighting farm fires. The purpose of the evolution was to provide a steady delivery from two 1½-in. lines with fog nozzles, while at the same time shifting the source of water supply.

In a recent test of this evolution the procedure was as follows:

A GMC pumper-tanker with a 900-gallon tank pulled in to the site of a simulated fire and two 1½-in. fog guns were put into operation in 29 seconds. A Ford tank truck, also used by the department, was moved into position and its gravity discharge was coupled to the suction of the GMC.

A portable pump was placed at a near-by creek, a discharge line laid, and water was made available at the pumper from this source. The source of water supply for the fog lines was switched back to the GMC pumper; suction from the Ford tanker was disconnected; the line from the portable pump was attached to the pumper suction; water from both the pumper tank and the creek supplies was fed to the pump; then the supply from the GMC tank was shut down and the creek was the single source of water supply.

Ford tanker of 800-gallon capacity is positioned at rear suction gate of GMC. Note portable pump at rear of right deck of Ford. It can be removed by loosening one nut. Source of water can be switched to the tank truck and the tank in the GMC can be a reserve. When Ford tanker is empty, source can be transferred back to GMC while tanker goes for refilling.

Another source of supply on this farm was a cistern. Portable pump is removed by two fire fighters while others head for cistern with 2½-in. hose from bed of GMC. Water is still being supplied from Ford tanker.

(*At left*) With portable pump at cistern, suction is connected and water fed to pump on GMC. After changing the water source back to the GMC from the Ford the latter was disconnected and moved away. The 2½-in. line from the cistern was then made the sole source of supply.

Water is immediately available from a 900-gallon tank on the GMC. Two 100-ft. lengths of 1½-in. line and 150 ft. of 1-in. booster line are carried pre-connected. Nozzlemen, riding on rear step of truck, open quarter-turn discharge valves within reach of their left hands, pull out two or three folds of hose for slack and advance on fire. Fog nozzles are pre-attached to each of the three lines. If necessary, 100 ft. of 2½-in. hose, pre-connected to the center of the discharge wye can supply an attached 2½-in. fog nozzle, or can serve a 2-way gated wye as a 100 ft. advanced supply for two 1½-in. lines. Water in tank has an additive of fire service penetrant for quicker heat absorption.

(*At right*) By using a hose clamp on the line from the cistern and by proper valving of the water from the GMC tank the change to cistern supply was made without interruption of the fog streams.

Not Elizabeth, N. J., But . . .

By George H. Tryon III, NFPA Assistant Technical Secretary and Secretary of NFPA Committee on Aviation and Airport Fire Protection.

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WHAT happened in Elizabeth, N. J., could happen in your town, U.S.A.! Airport proximity influences susceptibility to such occurrences but no city stands immune!

Chicago, Illinois; Morningside, Maryland; Hollywood, California; Seattle, Washington; Temple City, California; Reno, Nevada; and Denver, Colorado — all these cities experienced aircraft fire accidents within their built-up districts during 1951. It was Elizabeth's fate to bring the matter into national focus.

For the fire service, the problem is two-fold. How do we gage our vulnerability? How do we prepare for such an emergency?

What's Been Happening?

The first Elizabeth, New Jersey, accident, occurring on December 16, involved a twin-engine C-46 operated by a non-scheduled airline. From data now available, it is clear that fire in one engine, occurring immediately after take-off, was responsible. The aircraft was heavily loaded (56 persons plus full fuel load) and the pilot could not maintain altitude with the single operating engine. When the fire collapsed the wing, the aircraft became uncontrollable and crashed. It rammed an unoccupied, former water pumping station, dropped into a shallow creek, and was consumed by fire. All aboard were killed but none on the ground was injured.

The second Elizabeth accident, on January 22, took 30 lives, seven of them Elizabeth residents. The aircraft was a twin-engine Convair operated by a scheduled airline. Unlike the first, this accident occurred during landing approach. It appears clear that airborne difficulty (although not fire) was involved. The aircraft abruptly shifted course while making an instrument landing under adverse weather conditions, dropped at a sharp angle, struck two dwellings, and burst into flame. Indications are strong that at least one control surface failed in flight. The certainty is that whatever happened, happened suddenly and without warning.

Accident number three in Elizabeth took 33 lives on February 11. Like the first, it occurred minutes after take-off from nearby Newark Airport.

This aircraft, a DC-6, operated by National Airlines, was the only four-engine aircraft of the three. The reasons for the airborne emergency in this case are even less well established than those indicated for the second crash. It appears that both engines on the right side were not operating normally at a critically low altitude.

What the Three Accidents Mean

Note that each accident involved a different type of aircraft. Note that all involved airborne difficulties, each different in basic cause. Note that experienced pilots could not prevent disaster.

Realize that Elizabeth's proximity to Newark Airport and the landing and take-off pattern of that Airport for the runways in use were factors. Realize that while similar accidents might have occurred anywhere along the air routes, the fateful timing of the airborne difficulties were beyond human control. Realize that the flight failures, coupled with the altitude of the aircraft involved as they arrived or departed from the airport, combined to overcome both pilot skills and aerodynamic lift.

(International News Photo).

Three occupants were killed in this dwelling struck by a pilotless bomber.

(International News Photo)

A USAF "Superfortress" crashed this apartment minutes after take-off from Boeing Field.

(Denver Post Photo)

A B-29 fell 7,000 ft. short of the Lowry Field and dived into a group of residences.

FIRE department administrators should survey their city's vulnerability to these types of accidents. They should check landing and take-off patterns from nearby airports. They should note which buildings are particularly susceptible to aircraft collision. They should preplan what they could do with the equipment they have available. They should determine what special rescue and fire-fighting equipment they might add to their present facilities to cope with an aircraft emergency.

If your community does not have an airport, you are not necessarily "safe." It is difficult to forecast an aircraft emergency. Certainly the pilotless B-25 which crashed into a dwelling in Morningside, Maryland, on April 9, 1951, could not have been anticipated. The crew of three had parachuted leaving the aircraft on automatic pilot. Unfortunately there was no safe haven for the three occupants of the dwelling, two of them children, who were trapped in their flaming home.

When Pilot Whitehouse landed his Fairchild on Magnolia Boulevard in North Hollywood, California, on June 23, he wasn't doing so by choice. He would have liked to have made the Lockheed Air Terminal in Burbank but engine failure prevented.

In other words, you should be prepared, regardless, but *particularly* prepared if you are in an accident-prone zone near an airport. Statistics do show that 69.2 percent of the air carrier accidents involving fire after crash have occurred on or within five miles of airports during the period January, 1947 to August, 1951.

What You Should Do

First of all, make certain that the airport is protected by adequate aircraft rescue and fire-fighting equipment. As a guide to determine airport equipment requirements, consult NFPA Pamphlet No. 403 (50c per copy) which was discussed in the September, 1951, FIREMEN.

Second, establish and train your fire fighters in the use of your standard equipment in aircraft rescue and fire fighting. To aid you in this latter work, a Conference Committee of the NFPA Committee on Aviation and Airport Fire Protection has drafted recommendations for "Aircraft Rescue and Fire Fighting Techniques for Municipal and Rural Fire Departments Using Conventional Fire Apparatus and Equipment." These recommendations are detailed in NFPA Aviation Bulletin No. 80, available from the NFPA Executive Office for 50c per copy.

Tests conducted by this Conference Committee, headed by Battalion Chief A. M. Grunwell, District of Columbia Fire Department, showed that effective rescue operations can be executed by rural or municipal departments without specialized equipment provided personnel are adequately trained.

Procedures particularly recommended provide for the use of multiple water spray (fog) hose lines (number and size depending on water supplies; the more and the larger, the better) discharged at 100 lbs. nozzle pressure. Wet water is recommended if a proportioner is available. The use of a wetting agent is increasingly important where water supplies are limited.

(Please turn to page 22)

Credit for photos at right. (Top) Acme Photo; (Second from top) International News Photo; (Third from top) United Press Photo; (Bottom) Associated Press News Photo.

Scenes of the three disasters at Elizabeth, New Jersey, offer convincing evidence of the need for fire departments in any municipality to be prepared for such emergency. While lives may be lost through crash impact, fire fighting and good rescue work may minimize these losses.

(*Left*) Lakewood's new rescue boat is 26 feet long, has a beam of over 9 feet and is powered with a 150 hp Chrysler Royal Marine. It can travel at 33 mph with a crew of 6 men aboard. Like all apparatus in the Lakewood Fire Department it is equipped with two-way FM radio. It was built by the Eddy Boat Company located on Chautauqua Lake. In addition to grappling and drag hooks, life preservers, and other rescue boat equipment it has an Ansul dry powder extinguisher, an E & J resuscitator, a built-in pump, 50 ft. of 1½-in. hose, and a 50 ampere Leece Neville generator.

Lakewood, New York, Fire Department

LAKEWOOD, New York, is located on Chautauqua Lake, four miles from the City of Jamestown. It is primarily a residential community with a population of approximately 3,000.

The Lakewood Fire Department (NFPA Member Department) headed by Chief Ralph J. Anderson, consists of two companies: the Lakewood Chemical Company, Inc., and the Lakewood Hose Company No. 1. There is a total active membership of 90 volunteers. In addition to Chief Anderson there are two assistant chiefs, and a captain and lieutenant of each company, all elected annually by the volunteers.

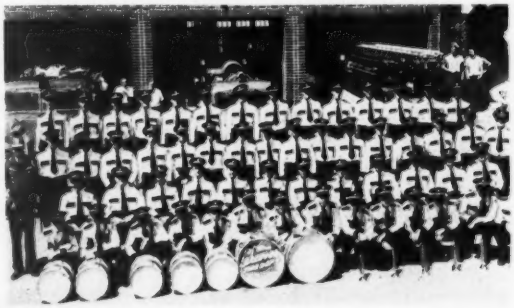
The Department is adequately prepared for rescue operations. Shown above on this page is a recently acquired rescue boat. The Lakewood Rescue Boat House is located two blocks distant from the Lakewood Fire Hall, and is on the lake front.

Rescue calls are answered anywhere on the 21-mile lake. The crews are all active members of the Fire Department trained for rescue work on land and water.

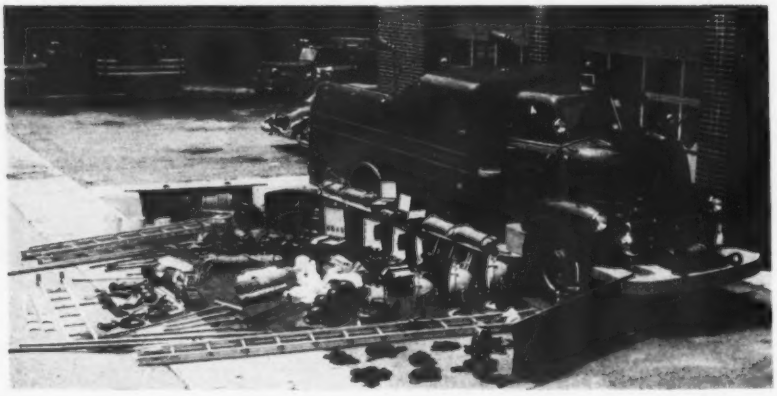
A rescue truck (shown below) is dispatched to follow the course of the rescue boat by land. This truck was designed by George V. Blackstone of the Lakewood Fire Department and built by Mr. Al Nelson, vice-president of the J.N.K. Machine Shop of Jamestown, New York. The body is designed to accommodate a wide variety of equipment used for non-fire emergencies, which occur on the average of 36 times a year.

The truck is mounted on a GMC chassis. Compartments are provided for two MSA Chemox self-generating masks and two MSA demand type oxygen masks. Also in individual compartments is an E & J resuscitator with auxiliary micro-mask, a portable acetylene cutting outfit with medium sized tanks that can be readily removed from the compartment, or operated without removal, and a large first aid kit.

OTHER apparatus consists of: Engine No. 1, a Chevrolet truck with a 500 gpm combination pump, 400 ft. of 1½-in. hose with 200 ft. preconnected, a 350-gallon booster tank, 200 ft. of 1-in. booster hose, and miscellaneous equipment; Engine No. 2, a Buffalo Fire Appliance 500 gpm triple combination pumper, with 1,300 ft. of 2½-in. hose, 400 ft. pre-connected, a 400-gallon booster tank, 150 ft. of ¾-in. booster hose, a 35-ft. 3-section aluminum ladder, and a Grant Jr. multiversal nozzle of 800 gpm capacity; Engine No. 3 is a Buffalo Fire Appliance 500 gpm semi-quadruple combination pumper with 1,200 ft. of 2½-in. hose, 200 ft. of ¾-in. booster hose, an 80-gallon booster tank, 115 ft. of ladders, and other miscellaneous equipment.



(*Right*) Members of the Lakewood Fire Department Drum Corps shown in front of the Lakewood Fire Station. For further information see FIREMEN for June, 1948.

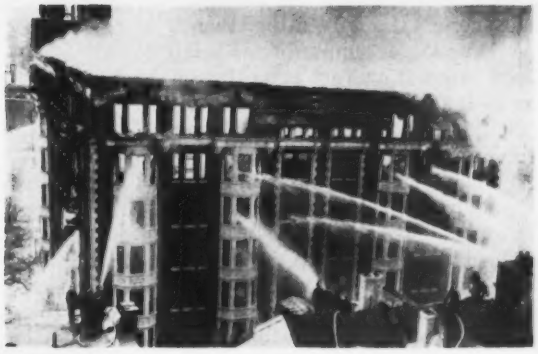


(*Left*) Land Rescue No. 1 features 35-ft., 25-ft., 14-ft., and 10-ft. aluminum ladders; 1,350 ft. of manila rope of different sizes; a Gar Wood winch of 15,000 lbs. capacity; 300 ft. of winch cable with swivel attached; assorted chains and hooks; welding equipment; 2 hydraulic jacks; lighting equipment; a 1,500 watt, 100 volt D.C. portable generator; an 80 ampere Leece-Neville generator; a 24-in. portable gasoline-driven chain saw; and other miscellaneous equipment, as shown, all of which is stored in compartments on the truck.

Alarms for the Lakewood Fire Department are sounded by a 5 hp siren at the fire station and two 1 hp sirens at the east and west ends of the village. The large siren operates automatically whenever the number 888 is dialed on the Lakewood telephone exchange and the station phone is then used to obtain details on the location of the emergency.

Fires in the News

(Right) Williamsport Die and Machine Company, Williamsport, Pennsylvania. February 1. A night watchman discovered fire in the main work shop of this building. Fire blocked his path to telephones and approximately 24 minutes elapsed before he could get to an outside fire alarm box. The delayed alarm gave the fire time to fully involve the slag roof when first apparatus responded from the Williamsport Fire Department. A second alarm brought members of the Loyalsock Volunteer Fire Company. Despite the use of 6 engine companies and a ladder company fire spread from the center of the building to the exterior walls. A fire wall protected a boiler room and a stock room. Total damage was estimated at $175,000.



(Above) Veterans' Housing Project, Manhattan Beach, New York City. February 4. (*United Press Photo.*) A six-year old boy played with matches and a resultant fire destroyed this 2-story, wood frame multiple dwelling that housed 16 families. Occupants attempted to fight the fire with extinguishers and a hose line before calling the fire department. Fire fighters responding found one entire apartment on the first floor involved, with fire extending through second floor to a main hallway, then through the second floor ceiling to a cockloft. Four alarms brought 15 engine companies, 4 ladder companies, and 12 other units. All occupants escaped but the 16 dwelling units were totally destroyed. **(At right)** An interior view of the main hallway. (*International News Photo.*) ➔

(Above) Clinton Hotel, Philadelphia, Pennsylvania February 29. (*International News Photo.*) Fire started in a linen closet of the basement of this hotel. According to a report, employees tried to extinguish the flames for 1½ hours before sending a telephone alarm. When first apparatus responded the entire basement was involved. Fire spread rapidly through wood lath walls, open stairwell, and elevator shaft. The 7-story building had brick walls, wood joists, floors on wood beams, and a slag roof. This was a 7-alarm fire that brought response from 28 engine companies, 7 ladder companies, 2 rescue squads and other apparatus. A total of thirty-seven 2½-in., five 3½-in., and fifteen 1½-in. lines were used in fighting the fire and protecting exposures. Patrols extinguished other fires started by burning embers that were carried over the neighborhood.

(Below) Producers Seed Company Plant, Piper City, Illinois. February 7. (*United Press Telephoto.*) Delayed discovery, undivided areas, height and large amount of wood frame construction, resulted in an estimated fire loss of nearly $750,000 for two buildings used for shelling, cleaning, drying and storage of corn.

(Below) Business block, Crawfordsville, Indiana. February 2. Two industrial plants, a garage, and a warehouse were destroyed by this fire. Apparatus from 9 fire departments responded to alarms, but combustible contents, a fall of water pressure and a high wind combined to result in an estimated loss of $750,000.

Operating Fire Department Pumpers

SUCTION OR COMPOUND GAGE

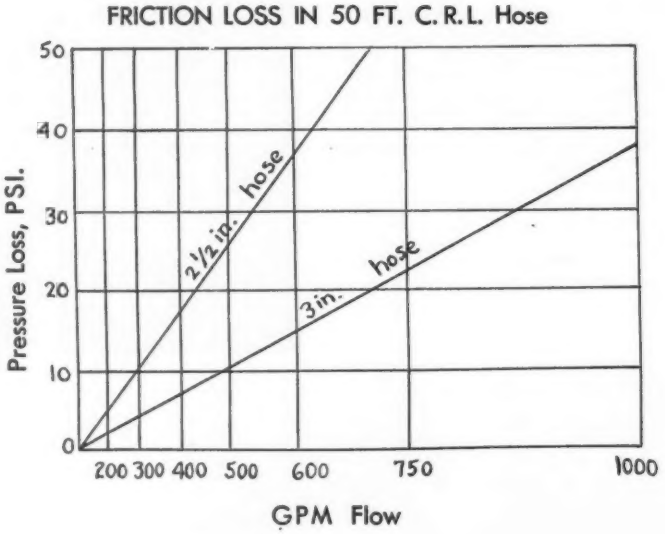
THE following are some general suggestions concerning the significance of readings of the compound gage on the suction side of the pump:

1. The gage on the inlet side of the pump will show "positive pressure" (pressure above atmospheric) when the supply hose or hydrant is providing water at a rate greater than the output of the pump. When the output is greater than the supply at the point of intake, the pressure on the inlet gage will fall below atmospheric. If a soft, rather than a hard suction or supply line is being used this will at least partially collapse due to the pressure of the outside atmosphere. (29.7 pounds per square inch at sea level.)

When a pumper is receiving water from a hydrant the gage reading before any hose discharge lines are opened will show the static pressure in the water system. As streams are placed in operation from the pump the inlet gage pressure will fall, because the movement of the water causes pressure losses due to friction in the supply mains, hydrants, and suction or supply hose.

It is important that the suction hose or supply lines be large enough to supply the amount of water needed and available, without excessive loss of pressure on the inlet or supply side of the pump. If these supply lines are not of sufficient size there may not be pressure enough to move the needed quantity of water into the pump, where pressure may be increased and provided to the discharge outlets.

A pump capable of 750 gpm may be connected to a hydrant providing 750 gpm at 30 lbs. flowing pressure, but if the supply hose between hydrant and pump is too small the 30 lbs. will be expended in friction loss and there will not be sufficient pressure to take the desired quantity of water to the pump inlet.



For example, say a 50-ft. length of 2½-in. hose is used between the hydrant and pump. When 530 gpm (see chart) is reached the friction loss in the supply line will have used up all of the pressure in the hydrant. On the other hand, 50 ft. of 3-in. hose would have used up about 22 lbs. of hydrant pressure with 750 gpm flowing.

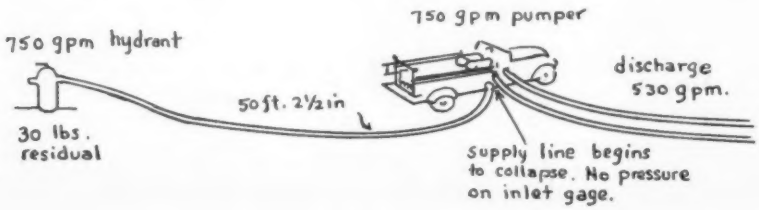
If accurate, the pump inlet gage would show only about 7 or 8 lbs. in that instance, even though a gage placed on an unused outlet of the hydrant would show 30 lbs. residual pressure with the 750 gpm flowing.

With very large flows there may be pressure losses of over 10 lbs. between the hydrant and the inlet gage on the pumper even where large diameter suction hose is used. (Some interesting data on pressure losses in suction hose is included in the booklet "Fire Engine Tests and Fire Stream Tables" published by the National Board of Fire Underwriters.)

THE reading on the suction gage shows the pressure under which water is being supplied to the pump. It will also give indication of the quantity of water available for use. To get this information the pump operator should always observe the static pressure recorded on the gage when water is coming into the pump but none is being discharged.

Identical readings will appear on both gages on a centrifugal pump, or on a positive displacement pump when the by-pass valve is open. This reading should be noted carefully and remembered. As soon as a discharge valve is open and a line is in operation, another reading should be made of the suction gage to observe the amount of drop in incoming pressure. If the difference in these two readings is slight, or does not exceed about 25 percent, this indicates that there is additional water available for another hose line. On the other hand, a major drop in the incoming pressure indicates that the water supply is limited and there may not be enough water for another stream of the same calibre from that hydrant.

For example, assume the suction gage shows a reading of 50 lbs. pressure with the hydrant open, but no water leaving the pump. If this drops to 40 lbs. when water is turned into a 2½-in. hose line it is safe to assume that the amount of water still available at the hydrant is at least equal to that being discharged. However, if the pressure drops from 50 to 30 lbs. there will not be much more water from the hydrant.



DURING practice pumping sessions pump operators should connect their pumpers to hydrants of different capacities, both more and less than the capacity of the pump. In this way they can get personal experience with how much water is available from hydrants in different parts of town, how their pump can use the water, and the various gage and engine speed readings.

Performance of different pumpers with the same hydrant supply may vary. Assume that a 750 gpm pumper connects to a hydrant having a 50-lb. static pressure but capable of discharging only 375 gallons at 5 lbs. residual pressure. With the operation of the first 250 gpm stream through a 1⅛-in. tip, the residual pressure would drop to about 30 lbs. When the pump has "pulled the hydrant down" to 5 lbs. it would only obtain 375 gpm. A Class A 750 gpm pumper can discharge that 375 gpm at 250 lbs. pressure without help from the hydrant. On the other hand, a Class B 500 gpm pumper could only pump about 250 gallons at 230 lbs., or about 300 gallons at 200 lbs. from the same hydrant.

Next, assume that a 500 gpm Class A centrifugal pumper connects to a 50-lb. hydrant which drops only 3 lbs., or say 6 percent, when the first 250 gpm line is opened. It immediately is evident that the hydrant can give 750 gpm at 30 lbs. residual. Thus, the limiting factor may be the possible water horsepower output of the pumper.

A good 500 gpm pumper might take the 750 gpm available at about 30 lbs. and perhaps add 100 lbs. discharge pressure and discharge the 750 gpm at 130 lbs. A Class A 750 gpm centrifugal pumper would have been able to take the 750 gpm at 30 lbs. and discharge at 180 lbs. or better. Each fire company and each operator should know approximately what the pumper will do connected to various hydrants in the territory served.

2. When connected to a hydrant or other source of water supply under pressure, it is desirable to maintain at least 5 lbs. pressure on the suction gage. However, with large flows, the friction in the hydrant and suction hose may be five to ten lbs. or more. When using a soft suction, the point at which maximum volume is being received can be detected by feeling the suction hose at the point it enters the pump intake. If the soft suction or incoming hose is soft and flabby when squeezed it indicates maximum delivery, since there is no pressure left to keep the suction hose solid. Any attempt to get more water will result in the suction hose collapsing at the point it connects to the pump intake. The reliability of the suction gage readings at pressures near the zero mark may be determined by this method.

3. A sudden drop in the pressure reading on the suction gage may indicate that other pumpers have connected to the water system at hydrants located in the neighborhood or may indicate a break in the main or other failure of the water system. Officers of fire departments should order additional pumpers to draw water from the system only when they are sure the system is able to supply them at the desired location. This can usually be determined by questioning the operators already hooked up. The officer should know how much additional water he can expect by the size of the pressure drop caused by the quantity of water already being pumped. The comparative flow capacity of different size water mains usually encountered in municipalities is shown in the table at right. Additional data about water mains can be secured from the Crosby-Fiske-Forster Handbook of Fire Protection. A 6-in. water main is the absolute minimum that should be installed with fire protection in mind, and 8-in. or larger mains should be installed where even moderate sized flows for either domestic or fire service demand may be anticipated.

4. When the pump is drafting water the suction gage will show less than atmospheric pressure or a "vacuum." Pressures below atmospheric are recorded on the scale from 0 to 30, as "inches of mercury." All readings on the positive scale are in "pounds pressure per square inch."

While this may seem complicated the explanation is simple. It is the normal practice to register any changes in atmospheric pressure from the sea level normal of 14.7 psi with a barometer. If liquid is placed in an upright tube that is closed at the top and open on the bottom in such a manner that the fluid does not run out, it will register variations in atmospheric pressure. The downward pressure of the weight of the fluid in the column in pounds per square inch will balance with the pounds per square inch atmospheric pressure.

Residual Pressures at Given Flows
(disregarding hydrant efficiency)
1000 Ft. Water Main, One Direction Supply

1000 FT.	75 PSI Static at Hydrant	Residual Pressures in PSI at Given Flows in GPM 250	400	500	750	1000
4-in.		46	6	X	X	X
6-in.		70	65	60	44	23
8-in.		74	73	71	67	62

Pressure Loss Per 1000 ft. Water Main* (one way feed)

	Flow in GPM
4-in. — 29 psi	250
4-in. — 100 psi	500
6-in. — 15 psi	500
6-in. — 52 psi	1000
8-in. — 3.6 psi	500
8-in — 13 psi	1000
8-in. — 27 psi	1500

*Data based upon Hazen & Williams formula with constant of C=100 or average for 15 year old pipe. With old mains, pressure loss may be greater.

(Please turn to page 24)

Industrial Fire Protection

This new feature of FIREMEN *highlights items of interest to industrial fire brigades and to fire departments that protect communities containing industrial installations. Members are encouraged to submit ideas, pictures, and news items pertinent to industrial fire protection.*

Recent Industrial Fires

THE reports of fires submitted to the NFPA Fire Record Department illustrate some of the problems that arise in industrial fire fighting. Readers of FIREMEN may find in these reports information or lessons that would be applicable to the industrial property in their community. From time to time digests of these fire reports will appear in this section. Member fire departments and industrial fire brigades are encouraged to send reports of such fires to the NFPA Executive Office, 60 Batterymarch Street, Boston 10, Massachusetts.

Distant Water Supplies

Many times fire fighters responding to a fire on industrial property are hindered by limited or distant water supplies or by the construction of the involved building. As a result, fire that could be controlled under normal conditions causes needless damage. Such was the situation when fire occurred in a frame iron-clad elevator on the property of the Farmers Union Elevator and Feed Mill, Pawnee City, Nebraska, on January 30. Fire fighters had to pump through 900 feet of hose to get water to the building and then the iron siding "protected" the burning contents from hose streams. The elevator was of approximately 10,000 bushel capacity. Loss was estimated at less than $25,000.

Water Supply Valve Inaccessible

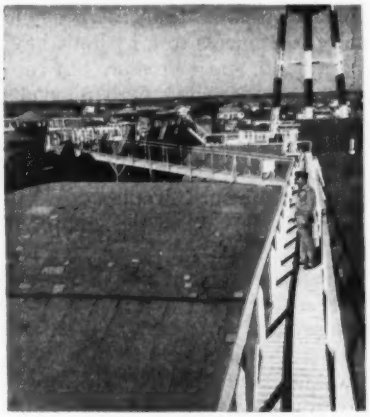
Battalion Chief Howard Mitchener of the Jefferson Township Fire Department reported this fire that involved the Matthews Woolen Company, Matthews, Indiana, on January 10. A large valve in the boiler room of the building controlled the water supply to washing units in the building and hydrants on the grounds outside. When fire started in the boiler room this valve was open. Hydrants were receiving only half of their capacity. The valve was inaccessible to fire fighters and there were only two hydrants on a six-inch main. A fire door failed to close and fire spread through this and an open stairway to the north section of the building. Limited water supply hindered fire fighting but other sections of the building and exposures were protected. Loss was estimated at $160,000.

Alfalfa Meal "Burned Like Punk"

A different method of storage or the application of a wet water penetrant may have given different results in this stubborn fire on the property of the W. J. Small Division of the Archer-Daniels-Midland Company, Fredonia, Kansas, on January 5. According to the report 24 carloads of alfalfa meal were contained in a storage room of about 40 x 90 feet in size. The steel framed masonry building had a galvanized and asbestos roof and the only openings in the involved room were a fire door and a door in a conveyor. Fire apparently had a good start before discovery and water supply for fire fighting was limited to a 2-in. main. Fire fighters attempted to control the fire through a roof opening with a 1½-in. hose and booster lines, but as the report stated "The water had no effect on the smoldering, smoking mass that burned like a piece of punk." Meal and other property in adjoining rooms of the building were saved but the roof over the burning alfalfa was destroyed. Loss was estimated at $100,000.

Membership

Industrial fire brigades are eligible to join NFPA as Fire Department Members. At present 128 brigades have NFPA Membership and are taking advantage of the "six-copy" plan of distribution of FIREMEN. Chiefs and other members of NFPA Fire Departments should encourage local industrial fire brigades to enroll in NFPA to get the benefits of fire protection information.



Three-Mile Catwalk

THIS catwalk is part of the fire protection facilities of the Beech Aircraft Corporation, Wichita, Kansas. It is three miles in length and covers the roof area of the Corporation's Plant L.

The catwalk bridges the "valleys" between buildings on the plant site so that plant guards and fire watchers may easily detect and locate any roof fire in the area.

To facilitate fire fighting four hose houses are maintained at different points on the roof. Each contains 250 to 300 ft. of 2½-in. hose. These houses are heated to maintain their operating ability in cold weather. In case of fire every section of the plant roof would be within reach of hose streams from the catwalk.

This International L-185 fire truck was recently placed in service by the Texas Eastman Company, Longview, Texas, a division of Eastman Kodak Company. The truck has a 750 gpm high-pressure pump, two fog guns and emergency lighting equipment.

The Ohio Fire Brigades Association

By L. E. Shingledecker (NFPA Member)
Supervisor of Fire Safety, Farm Bureau Mutual Insurance Companies, Columbus, Ohio

APPROXIMATELY four years ago we in Ohio realized the need for the availability of information for the leaders of industrial fire prevention activities. Members of fire brigades in industry found that the fire schools they attended throughout the United States dealt mostly with volunteer and paid fire department activities. We felt there was a need for three kinds of such instruction in the industrial field.

1. There was a need for a forum at which leaders of industrial fire protection could exchange and gain new ideas to keep abreast with new developments in fire protection and new fire hazards being found in industry.

2. There was a need for a school for training members of industries to be qualified to head fire prevention programs in their own organizations.

3. These selected leaders had to be given information on how to teach industrial fire safety to other persons.

With these points in mind we contacted the Ohio Fire Chiefs' Association, the National Fire Protection Association, state and national insurance associations and the National Manufacturers Association to gain their support in sponsoring a state or national group to establish an industrial training school. All of these associations felt that this was a worthy project, but none felt they were in a position to sponsor such a program.

WE THEN decided to organize our own association and the Ohio Fire Brigades Association, Incorporated was formed. Our only financial assistance came from the Mill Mutual Insurance Company, the Farm Bureau Insurance Company, and the National Manufacturers Association. Our Association was formed under the guidance of the paid fire chiefs of Dayton, Springfield, and Columbus. The Youngstown Fire Department also gave active support to the activities of the Association.

During the past year we had one all-day meeting and a four-day school. The school was designed to help not only industrial organizations but also mercantile and any other type of organization in need of a fire prevention program.

It was intended to meet the needs of three groups:

Group A provided instruction for those desiring to organize fire brigades and provided preliminary instruction and training for newly organized fire brigades.

Group B provided advanced instruction for leaders and members of industrial fire brigades. Group C provided information and advanced instruction in fire safety. It was intended primarily for industrial fire chiefs, safety directors and those who previously had been in Group B.

During 1952 we hope to continue these meetings and include closer working relationship with our members.

Fire Brigades Association Meeting at Columbus, Ohio

THE possibility of forming a Fire Brigades Association on a national level was discussed at an afternoon dinner meeting held at the Southern Hotel, Columbus, Ohio, on March 6. The meeting was called by officers of the Ohio Fire Brigades Association, Inc., who served as hosts. Under discussion were possible objectives of a national fire brigades organization, such as training programs designed to meet the specialized needs of industrial and private fire brigades, standardization of information on fire brigade practices, encouragement of cooperation between fire brigades and public fire departments, and organization and training of additional fire brigades.

Guests in attendance are shown above. (Front row, left to right): George Reed, Supervisor of Safety and Fire Protection, Shellman Products Corp.; C. S. Kuskowski and W. F. Ballard, Columbus Coated Fabrics Corp.; L. E. Shingledecker, Supervisor of Fire Safety, Farm Bureau Insurance Company, Columbus, Ohio; and Ray Hart, Safety Manager, Dayton Rubber Company, Dayton, Ohio.

(Back row, left to right): Charles R. Scott, Chief, Fire Prevention Bureau, Division of State Fire Marshal, Columbus; J. E. Frederickson, Director of Plant Protection, General Motors Corp., Detroit, Michigan, and Member of NFPA Advisory Committee on Industrial Fire Protection; Frank R. Middaugh, Superintendent of Schedules, Ohio Inspection Bureau, Chairman, NFPA Committee on Private Fire Brigades and Watchmen; Warren Y. Kimball, Manager, Fire Services Department of NFPA and Editor of FIREMEN; J. Ward Bush, Chief of Plant Protection, Caterpillar Tractor Co., Peoria, Illinois; Chief Walter G. Strickfadden, Columbus Fire Department; and Harry M. Pontius, Safety Director, Farm Bureau Insurance Co., Columbus, Ohio. Harrison S. Nolt, of the Columbia, Pennsylvania, Rural Safety Council also attended.

Communications from interested persons in other states were read and it was voted to encourage leaders of fire brigades in various states to meet and organize state associations. It was suggested that literature describing the Ohio Fire Brigades Association's program be prepared and distributed through the NFPA Committee on Fire Brigades and Watchmen.

In Cleveland, Ohio . . .

6 *New* 85 ft. All-Steel Aerials

3 *New* 1250 g.p.m. Triple Combination Pumpers

1 *New* 1500 g.p.m. Triple Combination Pumper

are in active service. Delivered in the past six months, these American-LaFrance cab-ahead-of-engine aerials and pumpers are part of a modernization program of the Cleveland Fire Department, inaugurated by Fire Chief Cain.

• *American-LaFrance 1500 gpm pumper. All pumpers equipped with discharge gauges for each outlet.*

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ELMIRA, NEW YORK, U. S. A.
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• *Cleveland's new American-LaFrance Aerials and Pumpers.*

These *Extra Values* Are Provided Only by AMERICAN-LAFRANCE

- V-12 Engines, American-LaFrance built for dependable, long life service.
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- Greater ladder stability—automatic safe load visual indicator.
- TRIPLEFLOW 2 stage centrifugal pumps—American-LaFrance built.

• *For Details of These Extra Values and MANY MORE, Write for Illustrated Booklet.*

Not Elizabeth, N. J. But

(*Continued from page 13*)

HOSE streams should be directed, as soon as possible (usually from the nose or tail position), along the fuselage where occupants are trapped. Efforts should be directed toward driving flames outward (to the side perimeters) while making a rescue *exit* path to removed trapped occupants. Heat and flame (burning vapors) should be directed away from the fuselage (not toward it). As nozzles are advanced through a ground spill fire they should be kept low with streams horizontal to avoid stirring-up gasoline ground spills and causing greater vaporization of the fuel.

The largest hose and nozzles should be used consistent with the water supply and the manpower available. A good operation would involve the use of six 1½-in. fog lines with approximately 100 lbs. nozzle pressure, using at least one applicator to keep the rescuers and the rescued "wet down." If plenty of water and manpower are available, 2½-in. fog lines would be preferable. Additional lines permit multiple approach and attack on the flames, giving more opportunity to cool the fuselage.

The Committee recommended the low-pressure fog (100 lbs.) in preference to high pressures (800 lbs. range) because the larger gpm of water available with the former technique would give more heat absorption. The latter technique is a second choice where water supplies are limited to that available on the apparatus. A 500-gallon, or larger, tank truck with preconnected 1½-in. hose lines is advocated where standard water sources might not be generally available.

IT WILL be noted that nothing has been said about carbon dioxide, dry chemical and foam. The reason is that these agents are normally not available in sufficient volume on conventional fire apparatus. When available in adequate capacity and when they can be discharged at sufficiently high rates they are generally more effective on large gasoline and flammable liquid spill fires than are water fog or straight streams.

If responding equipment happens to be adequately equipped with bulk

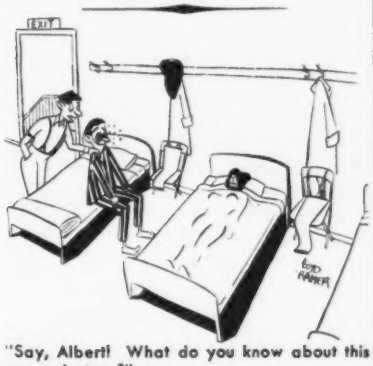
J. But Your City — U.S.A.!

supplies of these agents *and* has the necessary facilities for their rapid discharge, they should, by all means, be used. If the agents are only available in hand extinguishers, however, do not expect initial success with them unless the fires are caught in their incipient stage or are confined to enclosed spaces (engine nacelle, baggage compartment, etc.).

MOST important are (1) training and (2) size-up. The magnitude of an aircraft crash fire is a psychological barrier to fire fighters on first acquaintance. This can be overcome only by building realistic training fires and by effecting teamwork in the fire-fighting approach. Proper size-up and evaluation of the rescue problem constitutes a major decision and therefore officer personnel must be particularly well trained and familiar with aircraft crash fire problems and techniques. Training, as usual, assumes primary importance in this phase (as in other phases) of fire fighting.

It should not be expected that the rescue and extinguishment job following an aircraft accident can be accomplished on every occasion but the fact that it can be done is verified by these 1951–1952 tests and by actual crashes.

Never assume a crash is unsurvivable! Human occupants of aircraft have withstood amazing impact shocks and lived. It is the fire (flames, heat and gases) which most often kills. During January and February, 1952, the NFPA has received preliminary notice of 30 serious aircraft accidents, 25 of which involved fire either at impact (17) or in the air (8). Only 5 of these accidents did not involve fire. Are *you* prepared for such occurrences?



"Say, Albert! What do you know about this new volunteer?"

FIGHT FIRES WITH

Pyrodyne WET WATER

- NO CORROSION
- NO STORAGE
- NO MIXING

FOR LESS THAN 1¢ A GALLON

An Unlimited Supply . . .

Automatically Mixed as You use It!

Wet Water is not new. Everyone knows its advantages. However, application has been a very troublesome and expensive problem.

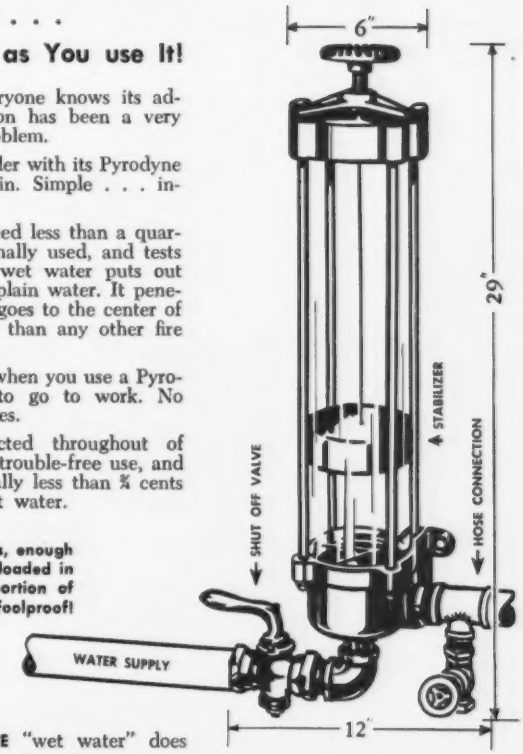
This is where our Pyroblender with its Pyrodyne (wet water) capsules steps in. Simple . . . inexpensive . . . easy to use.

With a Pyroblender you need less than a quarter as much water as is normally used, and tests have proved that Pyrodyne wet water puts out fires in one-fifth the time of plain water. It penetrates deeper, diffuses faster, goes to the center of the fire and cools it quicker than any other fire fighting product.

There is no fuss or bother when you use a Pyroblender. It's always ready to go to work. No cleaning necessary between fires.

Pyroblenders are constructed throughout of brass and lucite for lifetime, trouble-free use, and the cost of operation is actually less than ¾ cents per gallon of multiphase wet water.

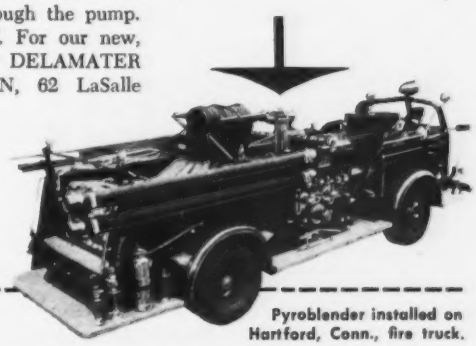
Hydroblender holds two capsules, enough for 2,000 gallons and can be reloaded in a matter of seconds. Unused portion of capsule keeps for future use. It's foolproof!



Pyrodyne

PYRODYNE "wet water" does NOT enter the tank or pass through the pump. *Equipment damage is eliminated.* For our new, free booklet just send a note to DELAMATER DISTRIBUTING CORPORATION, 62 LaSalle Rd., West Hartford, Conn.

We'll gladly arrange a demonstration for you.



Pyroblender installed on Hartford, Conn., fire truck.

In NEW ENGLAND Pyrodyne is sold by the following Distributors:

O. B. MAXWELL CO., 1224 Dixwell Ave., Hamden 14, Conn.
BLANCHARD ASSOCIATES, Winthrop, Maine
FIRE EQUIPMENT SUPPLIES, Walter Sholander, 98 Sefton Dr., Edgewood 5, R.I.
JAMES COFFIN, West Boylston, Mass.

Pyrodyne is distributed NATIONALLY by the Aquadyne Corp., 60 Beaver St., New York

Pyrene Playpipe, pickup tube, hose adapter, 4 gals. Pyrene Air Foam Compound—just $63. Everything you need!

One playpipe enables you to put out flammable liquid fires, bad spill fires. Multiplies fire-fighting capacity at locations where there is only a limited water supply.

It takes just

$63

to modernize a fire truck

with a Pyrene® AIR FOAM PLAYPIPE

A Pyrene* Air Foam Playpipe multiplies the efficiency of every fire truck. Just ask any of the thousands of fire departments now using them! With one gallon of Pyrene Air Foam Compound and 20 gallons of water, the playpipe produces 350 gallons of fast-acting foam. It's *sure death* to both flammable liquid fires and those in ordinary combustibles. That means the playpipe adds important extra ammunition to every fire department—for it equips each truck to cope instantly with blazing oil, gasoline and other flammable liquids. It is indispensable, too, for fire fighters that may be called to spots where water supply is limited. Yet with all these advantages, the total cost of each unit, consisting of playpipe, 4 gallons of foam compound and adapter, is only $63. Put a playpipe on *every* truck you have. Write for name of the Pyrene jobber nearest you.

*T.M. Reg. U.S. Pat. Off.

PYRENE MANUFACTURING COMPANY

587 Belmont Avenue **Newark 8, N.J.**

Affiliated with C-O-Two Fire Equipment Co.

Operating Pumpers

(*Continued from page 17*)

If the atmospheric pressure increases the force on the open end of the column of fluid it will cause the level to rise until the downward weight in the tube is equal to that outside. The point at which the fluid levels off in the tube will indicate the outside atmospheric pressure. If outside pressure falls, the level of the fluid will correspondingly fall, since less force is holding it up.

The level of fluid for various atmospheric pressures can be calibrated and the device used is a barometer. Mercury is used because it is more than 13 times as heavy as water. Since it is compact it does not require an upright tube of over three feet. Readings from a mercury barometer are in terms of inches of mercury. This term was carried over to the fire service. One inch of mercury equals 0.491 lbs. per square inch or 1.133 feet head of water. It should be easy to remember that 2 inches of mercury are equivalent to just under 1 pound.

5. When drafting water the vacuum gauge must be watched closely. A change in the reading will indicate several important possibilities: (*a*) the suction strainers on the end of the suction hose or in the pump intake may be clogged, and (*b*) the level of the water source may be falling.

(*Advice given at a firemen's banquet by Lt. A. M. Peel, Pump Instructor, District of Columbia Fire Department. "Place your transfer valve in volume; watch your pressure; do not exceed your capacity."* — Ed.)

Fire's The Enemy

BRITISH Information Services, 30 Rockefeller Plaza, New York 20, N. Y., has a film "Fire's the Enemy." It includes pictures of the fire attacks on Britain during the last war, the work of an auxiliary fireman, and is being used to stimulate enrollment of auxiliaries for the Fire Service currently in Great Britain. The film is 16 mm sound and runs 11 minutes. It may be rented for $1.50 or purchased for $32.50. Write directly to British Information Services in New York.

Dates to Remember

California: The 21st Annual Meeting of the California Rural Fire Association will be held at the Hotel Senator in Sacramento, April 25–27. The Association cordially invites all persons interested in rural fire protection to attend. Further details may be obtained from Secretary Clifford A. Ommert, 215 Battery Street, San Francisco 11, California.

Connecticut: The 11th Annual Connecticut Fire College will be held in New Haven, May 19th to 24th. The college will include sections on Fire Marshal, Fire Officer, and Firemen Training, and a new section on Industrial and Institutional Fire Protection. The final day will be combined with the New Haven Field Day demonstration.

Indiana: The 8th Annual Arson Investigators' Seminar will be held at Purdue University, April 28–May 2.

The 19th Annual Indiana State Fire School will also be held at Purdue University, May 26–29.

Details may be obtained from the Public Safety Institute, Purdue University, Lafayette, Indiana.

Iowa: The 28th Iowa State Fire School will be held at Iowa State College in Ames, May 20–23.

Kentucky: The 1952 Kentucky Fire School will be held at the University of Kentucky in Lexington, June 3–5. For details write to: Mr. John L. Thompson, Chairman, Kentucky Fire School Committee, Kentucky Inspection Bureau, Louisville 2, Kentucky.

Minnesota: The Minnesota State Fire School (formerly the Northwest Fire School) will be held at the University of Minnesota Farm School Campus, St. Paul, April 28–May 2.

Nebraska: The Annual Nebraska State Fire School will be held at the south side station in Grand Island, Nebraska, April 20–22. Further information may be obtained from E. C. Iverson, State Fire Marshal, Lincoln, Nebraska.

Oklahoma: The 19th Annual Short Course of the Oklahoma Fire College will be held at the Short Course Center, West 6th Avenue and Walnut Street, Stillwater, April 7–11.

Oregon: The 32nd Annual Conference of the Oregon State Fire Chiefs will be held in Medford, May 26–28.

Pennsylvania: The 14th Annual Pennsylvania Fire School will be held at Lewistown, August 4–8. For information write to Edgar A. Spotz, Public Service Institute, P.O. Box 911, Harrisburg, Pennsylvania.

Virginia: The 1952 Virginia State Fire School will be held in Norfolk, September 8–12.

Washington: The Annual Conference of the Washington State Firemen's Association will be held in Yakima, August 20–23. For reservations write to Reservation Committee, care of Yakima Fire Department, Yakima, Washington.

EVERY SPECIAL FEATURE FIREFIGHTERS NEED!

You won't be fighting a fire today and a cold tomorrow if you're equipped with *U. S. Royal* Firefighter Boots. Made specially for rugged use, they resist water, acids or chemicals. And those tough cleats may prevent a fatal slip . . . even on icy pavements.

U. S. Royal Firefighter Boots

- Reinforced ladder shank
- Wide skirted top pulls on or off, FAST
- Rubber yank-hooks
- Boot lining and insole of soft, warm felt
- Super-cushiony insoles
- Storm King or Short Boot lengths
- White cleated outsole for visibility
- Reinforced construction resists snagging

U. S. Royal Firefighter Coats

100% waterproof coats of sturdy black rubber with warm, maroon napped lining. Roomy, 2-piece body, raglan shoulders; fly-front with instant snap and dee fasteners; roomy outside patch pockets. No stitching in main body; seams cemented, outside gum-strapped. Fully vulcanized after making.

US ROYAL FOOTWEAR

UNITED STATES RUBBER COMPANY

Serving Through Science

ROCKEFELLER CENTER, NEW YORK

Fire Prevention Exhibit at Michigan State College

EARLE E. HOTCHIN, Secretary-Treasurer of the State Association of Mutual Insurance Companies of Michigan and Member of the NFPA Farm and Membership Committees, recently presented a fire protection and fire prevention exhibit at Michigan State College. The occasion was the 34th Annual "Farmers' Week" held on the grounds of the College. Approximately 50,000 people attended, mostly from rural sections of Michigan, adjoining states, and Canada.

An estimated 25,000 stopped to examine the fire prevention exhibit, pictures of which are shown on this page. Most of the "props" used were loaned by the Lansing Fire Department. Exhibits included a display of "torch" sweaters, a 5-gallon safety can that had lasted through the fire in the State Office Building in 1951 (see FIREMEN for April, 1951), and models that showed causes of fire through improper use of electrical appliances, careless smoking, and other hazards. The exhibition lasted for a 5-day period.

Earle E. Hotchin (left) shows a display that illustrates what an overheated electric iron can do when left unattended.

"Torch" sweaters were burned in a demonstration each afternoon. This exhibit drew the most attention from the visitors.

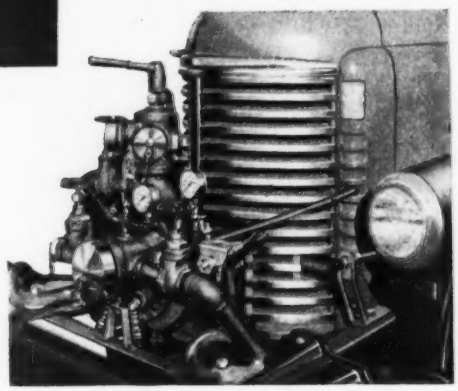
(Left) The safety can in this picture was found in the Michigan State Office Building after the fire. There was no rupture in the can despite the fact that it still contained 3 inches of gasoline. The collapsed can at right contained lacquer thinner but did not have safety features. Object at left of table is a love seat that was burned by a cigarette. Other exhibits included a bed lamp with a combustible shade a hay mow fixture showing proper protection for electric lamps in barns and dusty locations, and a panel showing cutaway models of different types of extinguishers.

SEE WHAT YOU CAN DO
using a BARTON-AMERICAN UA FRONT-MOUNTED PUMP!

First, you can use a *larger booster tank* on a standard truck chassis. You can get closer to the water supply and refill booster tank fast at 600 G.P.M.

You can "fight your way in" with fog gun at 400 lbs. pressure — using a straight stream at the same time if needed. And you can fight grass fires "on the go."

All this — and more — you can do *more effectively* with the Barton-American UA Front-Mounted Pump. It meets all Underwriters' tests.



UA is front-mounted . . . gear-driven . . . FROST-PROOF . . . positive priming.

GET FULL DETAILS
WRITE FOR
BULLETIN 8330!

BATTLE CREEK AMERICAN-MARSH PUMPS MICHIGAN
U.S.A.

Canadian Apparatus Plant: American-Marsh Pumps (Canada) Ltd., Stratford, Ontario, Canada

Good Stop at Grandstand Fire

FIRE fighters of the Crete, Illinois, Volunteer Fire Department found a heavily involved structure when an alarm called them to this fire in the grandstand of the Lincoln Fields Racing Association, Inc., in Crete, on January 30.

Workers preparing the grandstand and surrounding grounds for the Spring opening had left an oil fuel salamander unattended. A report stated that this salamander exploded and burning oil set the wood roof and floor on fire. A workman immediately reported the fire by telephone and the Crete Volunteer Fire Department responded from the fire station approximately two miles distant.

First apparatus was a 350 gpm pumper. While additional help was summoned from the South Chicago Heights Fire Department and the Steger and Beecher Fire Departments, maintenance and repair personnel of the Association laid two 2½-in. lines from a hydrant near the northeast corner of the grandstand. These lines were abandoned in a short while and eventually destroyed by the intense heat.

Associated Press Wirephoto

The 350 gpm pumper from Crete hooked on to a hydrant at the southwest corner of the grandstand and fire fighters advanced a 1½-in. line to the fire. A second truck, a 750 gpm pumper, was located directly east of the club house and two 2½-in. lines were placed in service.

Mutual aid response brought two 500 gpm pumpers. Additional 2½-in. lines were used at the northwest corner of the grandstand while booster lines were also put into operation.

The grandstand was three stories in height, of brick and steel frame construction. It had glass panels, a composition roof on wood boards, steel beams and columns, and wood joists. The first floor was of concrete and brick on earth, and was partly wood surfaced. The second floor had wood boards, steel beams and columns and unprotected floor openings. Although the property had private mains, hydrants, a water supply system, and private fire brigade facilities, the fire spread too rapidly for the employees to control.

Despite the advance stage of the fire when the first apparatus arrived fire fighters made a good stop in protecting exposed buildings, even though the grandstand was totally destroyed. Damage to the adjacent club house and other nearby structures, some within 50 feet of the grandstand, was slight.

Fire Brigade of English Electric Company of Canada

THIS company, manufacturers of electrical apparatus since 1939, has had a plant fire brigade at the St. Catherine Works in Ontario. The brigade has an NFPA Membership.

There are 18 members in the brigade headed by Chief George Jackson. Fire-fighting drills are held twice a month. Equipment includes a hand reel, fire extinguishers, masks and ladders. Seven hose houses are located on the Company grounds for fire emergencies.

Recently the brigade demonstrated fire fighting and fire prevention methods used in industrial plants. The demonstration was attended by members of the St. Catherines Fire Department and other visitors.

The wooden shed shown above was filled with highly combustible material soaked in oil and gasoline. Plant fire fighters extinguished the fire in one minute using two 1½-in. lines with fog nozzles. Other fire fighting evolutions were demonstrated in extinguishing oil pit fires and fires in flowing gasoline.

"The New Fire Engine"

THIS book, written by Jay Hyde Barnum, is a 48-page illustrated publication slanted towards the interests of 4–8 year-old children. The colorful illustrations and simple style summarize the story of a new fire department pumper. Cost of the book is $2.

Further information may be obtained from the publishers, William Morrow and Company, Inc., 425 Fourth Ave., New York 16, N. Y.

Emaus Fire Co. No. 1

THE Emaus Fire Co. No. 1, of Emaus, Pennsylvania, will celebrate its Golden Jubilee Anniversary on May 24. Approximately $3,000 will be awarded in prizes to visiting fire companies and ladies auxiliaries who participate.

For Sale — 1941 Cadillac Superior Ambulance

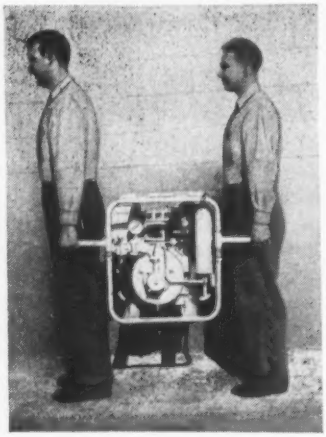
For further information write or call

FAIRFAX VOLUNTEER FIRE DEPARTMENT
Fairfax, Virginia Phone FAIRFAX 118

Hale Type FZZ

Fine For Relaying to Major Pumper . . . .

Easily Carried by 2 Men



Chief Leon Arnold of Newellton, La., writes . . . .

We have received from you your portable Pump, Type FZZ, which we are thoroughly satisfied with. We have only had to use it once since our purchase in September of last year, but it did a big pump job for 1½ hours through a 300 ft. line of 2½-inch hose branching off in a "Y" to two 1½-inch lines, 150 ft. each.

We carry this unit on our 500-gallon pumper to use in places where we can not get near enough to water. Two men can easily carry it any place.

We recommend the Hale FZZ Portable Pump for any Fire Department.

Below—FZZ Relaying through Major Pumper.

The Hale Type FZZ portable fire pumping unit pictured at top can be easily carried by two men to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct. Unit is also available mounted on two truck-type wheels or on rubber-cushioned steel channels.

The unit can be mounted on virtually any apparatus, making it possible to fight fire while apparatus is in motion, using booster tank for source of water.

Capacity of FZZ is 60 G.P.M. at 90 lbs. pressure; 150 G.P.M. at 30 lbs. pressure. Provides two capable fire streams through 1½" hose lines, using ½" nozzles.

Note: Discharge Adapter can be supplied for use with 2½" hose.

Ask for demonstration. No obligation

Write today for FZZ Folder to

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

Fire Experience of Airport Hangars

THE NFPA has just published an analysis of aircraft hangar fire experience based on 269 fires reported to the Association during the period 1930–1950. The Bulletin (identified as No. AH-4) is only available in limited quantities for $5.00 per copy.

The analysis is perhaps the most complete fire record study of an occupancy ever compiled by the NFPA. For fire departments, it presents technical information of value in "sizing up" the fire potential of such properties and gives important hints on fire prevention and protection methods.

Write to: National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

Public Service Guide

AS a contribution to public education in fire protection and fire prevention *Reader's Digest* has recently issued a publication on fire safety. It contains articles chosen from the *Reader's Digest* by its editors in consultation with the staff of the NFPA. This booklet undoubtedly will receive much public attention. Many NFPA members will want to make personal distribution of it. The publication regularly sells at 25c but members of the NFPA can obtain the following quantity prices: 10 or more 20c each; 100 or more 15c each; and 500 or more 12c each.

A copy of this publication was sent to NFPA Members with the March issue of *Fire News*. Other copies and quantity orders may be obtained by writing to *Reader's Digest*, Pleasantville, New York.

Seen at the recent White House Advertising Council meeting. Fire safety is discussed by (left to right) Fairfax M. Cone, Chairman of the Board of Directors, Advertising Council; Conrad Hilton, famed hotel chain owner; and Percy Bugbee, NFPA General Manager. The NFPA Home Fire Prevention Program is one of the Advertising Council's major year-round programs. (See FIREMEN, page 8, March 1952.)

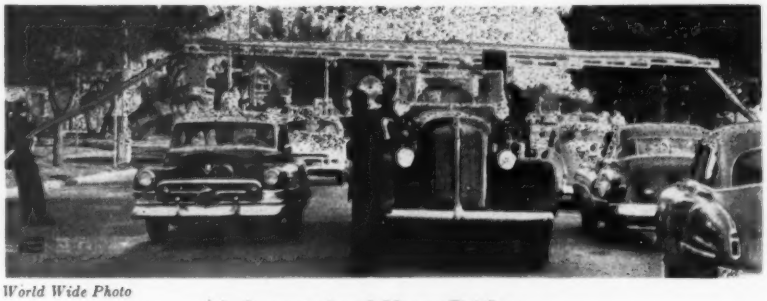
Data on the States

"THE Book of the States" is a biennial publication of the Council of State Governments, 1313 East 60th St., Chicago 37, Ill. The 1952–53 edition has just been issued. It is 754 pages, 7 by 10 inches, cloth bound and costs $7.50 (order directly from the publisher).

The book is the best source data for names of state officials, including fire marshals, insurance commissioners, state foresters and the like. The 1952–53 volume contains data on the development of interstate compacts, civil defense legislation, and state fire protection.

Boston Exhibition

THE First Annual Greater Boston Fire Show and Exhibition will be held at Mechanics Building, Boston, Massachusetts, June 4–6. Further information may be obtained from the sponsoring organization: Boston Board of Fire Underwriters, Inc., 89 Broad Street, Boston, Mass.



World Wide Photo

Improvised Hose Bridge

MEMBERS of the Miami, Florida, Fire Department recently cleared a 15-block traffic jam during a fire by this expedient. With a hose bridged on a ladder placed crosswise on a truck, traffic was able to pass the scene of operations without interference.

FogFOAM is discharged directly into flames, smothering fire in seconds.

Plane Crash Fire Controlled in Seconds

. . . *with Rockwood-equipped fire truck*

When Pratt & Whitney Aircraft division of United Aircraft Corporation decided to design a really outstanding fire truck, they turned to Rockwood for the special fire-fighting equipment needed. The result? A mobile unit that controls aircraft crash fires in seconds.

Two Rockwood FogFOAM Turret Nozzles mounted over the driver's cab are unique features of the unit. They discharge huge quantities of FOAM or FogFOAM into the fire, smothering flaming gasoline and blanketing wreckage. The Rockwood FOAM flows freely at sub-zero temperatures, clings to metal surfaces as an insulator, can be easily washed away after fire is put out.

If crash fires occur, the truck can speed directly to the scene . . . reaching any corner of a 650-acre flying field in one minute. Test fires have been controlled in less than 30 seconds!

Similar equipment is used for fighting gasoline spill fires on city streets, refineries, industrial plants, etc.

Get the Complete Facts! Rockwood's contribution to the Pratt & Whitney Aircraft truck is but one of many successful applications of Rockwood fire-fighting equipment. All types of equipment to combat all types of fires are available at Rockwood — or made to individual requirements. For complete details, send for your copy of our new illustrated catalog.

ROCKWOOD Type FFF FogFOAM Turret Nozzle can be manually operated from roof of cab. Other types of Rockwood Turrets can be hydraulically operated from within cab. Provides 4 different types of discharge: FogFOAM, solid FOAM stream, WaterFOG, and solid water stream.

ROCKWOOD Under Truck Nozzles and Ground Sweep Nozzles protect front and under parts of fire trucks. Also puts out fires in path of truck. Discharges FogFOAM or WaterFOG.

ROCKWOOD Hand Lines utilize Rockwood SG Type Nozzles. They discharge High Velocity WaterFOG, FogFOAM, Solid FOAM Stream and Straight Water Stream and are available in 1½" sizes only.

ROCKWOOD

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88 HARLOW ST., WORCESTER 5, MASS.

NFPA Member Departments

Bethpage, Fire Department
Bethpage, L. I., New York

SHOWN above is apparatus and fire station of the Bethpage Fire Department headed by Chief Harold Looney and assistant chiefs George Ludwig and Edward Schaaf. This volunteer department has 90 active fire fighters and a total membership of 110. Apparatus consists of a 750 gpm Mack pumper, a 500 gpm Ward-LaFrance pumper, a 500 gpm GMC pumper, city service truck, an ambulance, and a Ford floodlight and utility truck. The department protects a community with a population of 5500. The principal hazard protected is the Grumman Aviation Corporation consisting of five production plants and an airfield.

Each of two fire companies have a captain, a lieutenant, and 53 men. A lieutenant also heads a rescue squad of 20 men equipped with a 1939 Buick ambulance, an E. & J. resuscitator, a portable inhalator and Reeves stretchers. The Rescue Squad is supervised by a local physician who is department surgeon. The department is affiliated with the New York State Firemen's Association and the Nassau County Firemen's Association. Members receive instruction from the Nassau County Fire School and from company officers.

The department conducts an annual bazaar to raise funds and also is supported through taxes levied in the fire protection district. Current plans are to replace the city service truck with a modern aerial ladder truck.

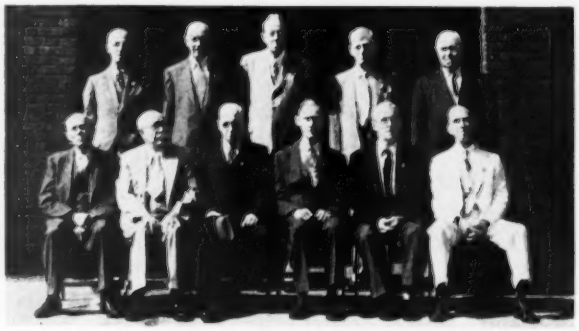
Secretary James M. Sturtevant states that the department regularly partcipates in annual tournaments of the 9th Battalion District of Nassau County and other tournaments on Long Island.

Middlebury Volunteer Fire Department
Middlebury, Connecticut

CHIEF Charles E. Chapman and Assistant Chief Francis J. Lynch and this department of 34 active fire fighters have a 500 gpm 1941 American-LaFrance pumper, a 1947 International 1200-gallon tank truck and a 1929 Hahn ladder truck. The department plans to acquire a 750 gpm pumper with a 1000-gallon tank. The department participates in fire training at the Connecticut State Fire College in New Haven.

Adams Township Volunteer Fire Dept. No. 3
Adams Township, Ohio

THIS department, headed by Chief Ollie Heltman and Assistant Chiefs Harry Zaker and Vince Swartz, has a total membership of 56 including 30 active fire fighters. Apparatus consists of a 1948 Ward-LaFrance combination pumper, a 1939 Ford with a 1300-gallon tank and pump and a 1950 Chevrolet rescue truck. The department is one of three in the Adams Township Association. The community protected includes a 30-square-mile area with a population of 10,000.



550 Years of Fire Fighting

These 11 firemen of Storm King Fire Engine Company of Cornwall-on-Hudson, New York, have each served with the Company for 50 years or more. They were recently honored at an annual dinner held by the Company. Their combined ages total 862 years.

WANTED

Men with fire department experience to train as fire prevention inspectors in our Engineering Department. We are a fire insurance organization insuring industrial and commercial properties throughout the United States and have two openings for Inspection Department trainees. High school education required.

Address Box F-100
Firemen Magazine
60 Batterymarch St., Boston 10, Mass.

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Flameproofing Chemicals

QRS de luxe for draperies
QRS No. 55 for glazed chintz and sheers
QRS No. 23 flame, water, mildew resistant paint for canvas
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Write for free catalogue and name of nearest distributor.

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170 North Halstead Pasadena 8, California

Fire Control Program in Montana

From a report by George W. Gustafson, State Coordinator, Montana Rural Fire Fighters Service.

DEFINITE progress has been made during the past year in rural fire prevention and control in Montana. Federal, State and local agencies have reported increased interest, improvement and additions to the fire fighting facilities, organization and training of rural fire fighting crews remote from fire departments.

The provisions of the County Fire Control Law have been put to use to a greater extent than ever before and every County has reported on some fire activity to improve the over-all fire control program.

The money appropriated by the Counties for fire control during the past year was $39,569.00, which is the largest amount ever appropriated in the State for this purpose for one year. This money was used for the purchase of fire-fighting tools and included equipping of 22 fire trucks, 11 trailers with water tanks and an undetermined number of small hand tools. This makes a total of 102 fire trucks and 40 trailers with tanks available for fire fighting in rural areas.

In 30 counties closed fire seasons were established. This is the largest number so declared for any one year. This action on the part of County Commissioners have held the number of fires in check and the losses in forest, range, and crop land to a minimum.

Training schools and demonstrations were held in 21 counties. The purpose of these schools is to train volunteers in the organization of fire-fighting crews, use of fire-fighting tools and equipment, and methods of fighting fires.

Experience in fire prevention and control, better organization, more tools and equipment, and trained fire fighters all add up to a stronger and more efficient fire control program for Montana.

Fire and the Air War
262 pp. $4.00 per copy

National Fire Protection Association
60 Batterymarch St., Boston 10, Mass.

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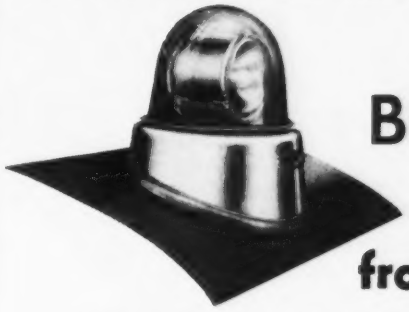
Phones 93 & 94 Charles Town, West Virginia
Established 1892

DANGER waits where least expected -



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Beacon-Ray
warns
from every angle!

Every crossroads is a crisis when you misplace your faith in *one-angle* warning lights! Equip your apparatus with the *one* emergency light that commands caution from *every angle* . . . the FEDERAL BEACON-RAY LIGHT.
Two Powerful sealed-beam lamps, mounted back-to-back, rapidly rotate for complete 360° protection on the way, or standing still at the scene of a fire. As more and more fire departments specify BEACON-RAY, this sweeping flash of intense light is becoming THE symbol of fire fighters on the way . . . automatic clearance of right-of-way from *all angles!*

Specify the Finest - **Federal Beacon-Ray Lights - Federal Coaster Sirens**

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FEDERAL ENTERPRISES, Inc.
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CARPENTER LIGHTS

HIGH POWER PORTALITE

The finest dry battery portable light made. Mile range. Powerful searchlight beam for 8 to 10 continuous hours. Instantly ready for any fire. Diameter 6". Size 14" high x 10" x 6". Only 9 lbs.

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FIRE and POLICE UNIFORMS

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Please send free catalog checked below:

☐ Fire Department Uniforms and Equipment
☐ Police Department Uniforms and Equipment

Mr. .....
Address .....
City..... Zone.... State...

Membership Report

ON PAGE 30 of the February issue of FIREMEN an announcement was made of a promotional plan for NFPA Fire Department Membership. The encouraging rise in membership during 1951 showed that the demand for FIREMEN Magazine and other NFPA publications is continuing to rise.

Readers have been asked to add their help in promoting NFPA membership. One of the most encouraging responses to the announcement was a letter from Robert F. Hamm (NFPA member), Director of Fireman Training, Indiana Rating Bureau, who recently forwarded this letter to FIREMEN.

Dear Warren:

Congratulations on the campaign to increase the fire department membership to 2000. (See FIREMEN for February, 1952, page 30.) If my mathematics are correct this is an increase of 292 departments in '52. If you had fifty fellows who would pledge to work for six new department memberships in 1952 you would go over the top. Well, I am one of them. Let's get going. Send me a few application blanks.

Sincerely,

ROBERT F. HAMM (NFPA Member)
Director, Firemen Training, Indiana Rating Bureau, Indianapolis, Ind.

Similar responses from other NFPA members would be welcomed. Any material that is necessary for the promotion of this campaign by members will be forwarded from the NFPA Executive Office, 60 Batterymarch St., Boston, Mass.

Many fire departments throughout the United States and Canada are not aware of what they can receive through an NFPA membership. Any member fire department or member fire department chief is entitled to six (6) subscriptions to FIREMEN plus single subscriptions to the NFPA *Quarterly* and *Fire News*. If more than six subscriptions to FIREMEN are needed for a fire department, then extra subscriptions costs only $1.25 each. NFPA membership for one year costs $12.50.

Fire departments have different means of securing money for memberships in various associations. One simple procedure is for a member of a fire department to propose at a monthly meeting that the department could benefit by receiving a number of subscriptions to FIREMEN Magazine. The $12.50 can be raised either from the fire department budget, from contributions by members of the department or by contribution from someone outside of the department. Whatever means is used, the small amount of $12.50 will bring to the fire department much more than its value in the form of the latest and most authoritative information on fire protection.

If you contact a non-member department or fire chief, explain the multiple-copy plan of FIREMEN Magazine, hand them the application blank that appears on the bottom of this page and tell them to write to NFPA. As Mr. Hamm's letter states, if 50 NFPA member departments could encourage six new departments to enroll in NFPA, the goal of 2,000 fire departments for 1952 would soon be realized.

NATIONAL FIRE PROTECTION ASSOCIATION
60 Batterymarch Street, Boston 10, Mass., U.S.A.

Application for Fire Department Membership in NFPA

Please enroll.....
(Name of individual or organization, rank, title, or business connection)

Individual ☐
Paid Fire Department ☐
Call or Volunteer Department or Company ☐
Industrial Fire Brigade ☐

City or Town.....**County**.....

Mailing Address.....

.....**State or Province**.....

Fire departments joining NFPA should send mailing list for 6 subscriptions to NFPA FIREMEN magazine. Additional subscriptions cost only $1.25 each.

Enclosed $12.50 (Check or money order) ☐

Please send bill ☐

NFPA Welcomes:

THE following chiefs and fire departments who have enrolled as NFPA Fire Department Members. Current membership totals 1,779 fire departments and 22,226 men.

Alabama: Chief J. M. Dean, Union Springs Volunteer Fire Department, Union Springs.

Arizona: Central Fire Station, Rural Fire Protection Company, Phoenix.

British Columbia: Gibsons Volunteer Fire Brigade, Gibsons.

California: Coronado Fire Department, Coronado; El Cerrito Fire Department, El Cerrito; Lakeport Fire Department, Lakeport; Napa Fire Department, Napa; Porterville Fire Department, Porterville.

Connecticut: Middlefield Fire Department, Middlefield; Wilton Fire Department, Wilton.

Illinois: Pleasantview Volunteer Firemen's Association, Incorporated, La Grange; Naperville Fire Department, Naperville; Urbana Fire Department, Urbana.

Indiana: Alexandria Fire Department, Alexandria; Chief Horace Robertson, Bloomington Fire Department, Bloomington.

Iowa: Riverdale Fire Department, Riverdale; Chief Lloyd E. Nelson, West Des Moines Volunteer Firemen's Association, West Des Moines.

Massachusetts: Chief Arthur C. Flynn, Central Fire Station, Peabody Fire Department, Peabody; Sandwich Volunteer Fire Department, Sandwich.

Michigan: Concord Fire Department, Concord; Kennett Fire Department, Kennett.

Missouri: Community Fire Protection District, Overland.

Montana: Bozeman Fire Department, Bozeman.

New Jersey: Basking Ridge Fire Company No. 1, Basking Ridge.

Ohio: Gibsonburg Volunteer Fire Department, Gibsonburg.

Pennsylvania: Chief Albert Fisher, Johnstown Fire Department, Johnstown.

Saskatchewan: Shaunavon Volunteer Fire Brigade, Shaunavon.

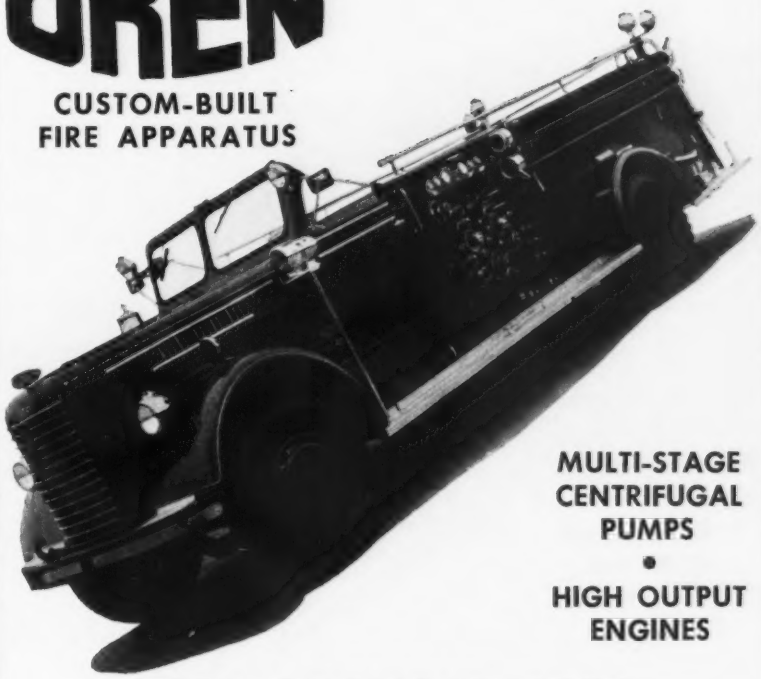
Virginia: Forestville Volunteer Fire Department, Incorporated, Vienna.

Washington: Castle Rock Fire Department, Castle Rock.

Wisconsin: Chief Ray H. Kramer, Elkhart Lake Fire Department, Elkhart Lake.

OREN

CUSTOM-BUILT FIRE APPARATUS



MULTI-STAGE CENTRIFUGAL PUMPS

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HIGH OUTPUT ENGINES

OREN ROANOKE CORP.

ROANOKE 16, VIRGINIA

You bet I specify MIDWESTERN Protective Clothing ...my men deserve the BEST!

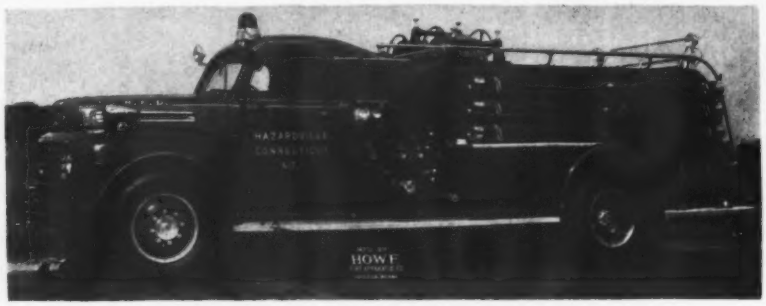
PROTECTION • COMFORT • SERVICE

There is no substitute for the extra protection, built-in comfort and longer wear you get by specifying Midwestern clothing. In our vast selection of rubber materials you will find the type of fabric exactly suited to your climate and needs. You can count on the softness and flexibility of the high-grade materials used to meet your most exacting requirements for lasting comfort and rugged service.

Due to government requirements for Midwestern Protective Clothing, prompt delivery will be assisted if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you literature and material samples for your inspection.

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous MACKINAW Coats



HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary, and Piston Pumps supplied
HOWE FIRE APPARATUS COMPANY, 1406 West 22nd Street, Anderson, Indiana

Better Hose Care--- with CIRCUL-AIR

THE AIR CONDITIONING
FIRE HOSE DRYER

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. NO OTHER DRYING METHOD IS SO FAST—SO ECONOMICAL—SO EASY TO USE.

ACCEPTED • APPROVED • RECOMMENDED

ACCEPTED as the standard drying medium in over 1500 fire departments — APPROVED by the leading testing laboratories — RECOMMENDED by fire hose manufacturers and Fire Chiefs "all over America."

PATENTED

If you are building, send for free copy of "Fire Station Design"

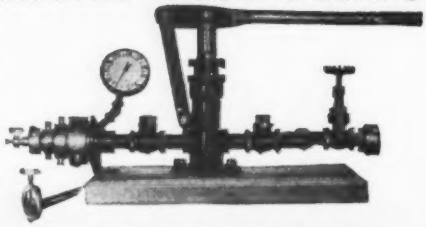
NEW HOSE DRYING MANUAL TELLS HOW TO DRY, STORE AND CONSERVE FIRE HOSE
May we send you one?

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Detroit 2, Michigan

"TRUMPET" HYDRAULIC TEST PUMPS

Ideal for testing hose lines of all sizes and length, directly from hydrants, without tying up costly fire apparatus. Equally efficient for checking high pressure air lines, sprinkler system, boilers and pressure gauges. Adapter available for testing Soda & Acid and foam type extinguishers. Has 400 lb. capacity.

Easy to use — accurate — built for long dependable service. See your Wooster Brass representative or write direct.



Manufacturers of a complete Line of Distinctive Fire Fighting Equipment

HOSE BRASS GOODS W&B LINE THE WOOSTER BRASS CO. WOOSTER, OHIO

WOOSTER BRASS
WOOSTER, OHIO
A DIVISION OF FYR-FYTER CO.

Fog Nozzle Performance

THE NFPA Committee on Fire Department Equipment, through its subcommittee on nozzles, is planning to conduct studies of fire department fog nozzles to determine discharges at various pressures, reach, and fog patterns. Observations are to be conducted at the American-LaFrance Laboratories at Elmira, New York, during July. Studies of all fire department fog nozzles from ¾- to 1-in. size to the large jumbo nozzles will be included. Readers having knowledge or information regarding fog nozzles are urged to write directly to subcommittee chairman, Robert C. Byrus, Director, Fire Service Extension, University of Maryland, College Park. The committee is anxious to study all fog nozzles commercially available to the fire service.

New Publication by RCA

THE Engineering Products Department, RCA Victor Division, of the Radio Corporation of America, Camden, New Jersey, recently published its first edition of "Communications News Mobile and Microwave Radio." This publication, an amply illustrated 32-page publication, measuring 10 x 13 inches in size, contained a number of articles on the use of radio in public service. This magazine will be published quarterly.

Also included in the book was mention of free booklets which may be obtained from this organization: Fleetfone "2-Way Radio for Industry," "2-Way Radio for Transportation," "2-Way Radio for Public Safety," and "What Is Microwave."

Further information on "Communications News" may be obtained by writing to the publisher at the above address.

"Now don't forget, Chief — 15 miles an hour for the first 1,000 miles, then . . ."

Letter to FIREMEN

Dear Mr. Kimball:

I have read with interest your editorial dealing with the bad publicity received by the Council Bluffs Fire Department resulting from their practice of transporting "dead on arrival" people first brought to a hospital and then to a mortuary upon authority of next of kin. (*See* FIREMEN *for January, 1952* — Ed.)

There were a number of questions in my mind as I thought over the embarrassment of Chief Waldo and his men. Originally, at the first inception of this practice, the firemen believed that they were doing just that "little bit more" for the people they served. Then the practice became standard procedure and, with it, a form of recompense in the nature of certain gratuities. At this point, the "little bit more" service ceased to exist.

Now, to me, it is questionable if it is good policy to carry our service to the point where we assume the work of other organizations, either private or municipal, except in certain emergencies. In the case of private firms such as ambulance companies or mortuary establishments, they would have a legitimate complaint should the fire department engage in their line of work after the emergency is past. Sometimes our good intentions are misinterpreted.

The most important angle in this case is the acceptance of gratuities. There are certain obligations we assume upon acceptance and these gifts often return to plague us when we must enforce building codes and fire prevention ordinances. Acceptance puts us in the class of lackeys and bell hops, neither of whom are recognized as skilled nor professional workers. Another thing, gratuities must be equally divided lest we develop jealousy and ill-will among the members. Any chief knows he must guard against having a "favored few."

People who feel they must show some recognition for a job well done can be advised that a letter would be the most suitable means of expressing gratitude, and a letter is a lasting token.

If we do the very best job we are capable of doing and realize the respect of the people is that "extra reward," the stature of the fire service will continue to grow until that happy day arrives when all firemen will be universally recognized as highly skilled, professional workers.

Sincerely yours,

PAUL K. PARKHURST, *Asst. Chief*,
Fire Department, City of Everett, Washington.

NFPA Inspection Manual
336 pp. $3.00 per copy
National Fire Protection Association
60 Batterymarch Street, Boston 10, Mass.

NO! CURLEY.. YOU DON'T HAVE TO BUMP THAT EXTINGUISHER!

To operate an Ansul Dry Chemical Fire Extinguisher you simply remove ring pin, push down puncture lever and squeeze nozzle. No bumping is necessary for mechanical breakage of the dry chemical. When Ansul Extinguishers are pressurized, the jet of high pressure gas instantly fluidizes Ansul *"PLUS-FIFTY"*® Dry Chemical.

You want properly designed fire extinguishers . . . designed for maximum effectiveness by inexperienced operators, designed for quick, on-the-spot recharge (no tools needed), designed for easy, economical maintenance. . . . You get all this with Ansul Extinguishers. In addition, you get the best fire extinguishing equipment capable engineers can design and a modern plant can manufacture.

ANSUL CHEMICAL COMPANY • **MARINETTE, WISCONSIN**

The "NEW YORKER"
(No. 5A - Regulation)

A national standard for a hundred years.

Other Leather Helmets in other weights, in regulation and drop brim style.

CAIRNS LEATHER HELMETS

The Least Expensive
Because
They Last the Longest

Write for Catalog 340

CAIRNS & BROS., INC. - Allwood, Clifton, N. J.
Outfitters to Firemen Since 1836

VOLUNTEERS:

Send for Approved

Flashing Signal

for your car . . .

CLEARS TRAFFIC

AVOIDS ACCIDENTS

Authorized by Many State Laws

RED LENS for Officers

BLUE LENS for Company

Only $8 complete with red or blue 6-inch lens. With automatic flasher $1 additional. Special discount in lots of 12 or more, any colors. Money back guarantee.

Order NOW from

FIRE-END PRODUCTS

19 Beekman St. New York, N. Y.

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What's New In Fire Equipment?

Portable Engine-Driven Electric Plants

The Winpower Manufacturing Co., Newton, Iowa, manufactures gasoline electric plants ranging in size from 300 to 10,000 watts. Shown above is the 5,000 watt model, G5000AR. It has an 11.1 hp., air cooled, 1800 rpm, Wisconsin engine. The generator develops 115/230 volt A.C.

A publication concerning other products of the company may be obtained by writing to the above address.

●

Bete G-5 Fog Nozzle

Bete Fog Nozzle, Inc., 85 Pierce St., Greenfield, Mass., has announced that the Bete G-5 nozzle has been approved by the Factory Mutual Laboratories. The nozzle is designed for use on a ¾-in. or 1-in. booster or garden hose. Price for the nozzle with garden hose thread is $19.90 each; for the nozzle with ¾-in. or 1-in. national standard thread, price is $21.70 each. Discount for quantity purchase. For further information write to the manufacturer at the above address.

●

Wooster Brass Catalog

The Wooster Brass Company, 1415 E. Bowman St., Wooster, Ohio, has announced that its Firemanic Wall Chart and Calendar, originally printed for free distribution to fire chiefs and instructors, is now available at $1 per single copy including postage or 50c per copy in bulk shipments of 25 or more. The large wall chart not only contains a 10-year calendar but also has many illustrations and other information of help to firemen's training.

Further information may be obtained from the company at the above address. Due to a recent change in ownership the Wooster Brass Company will henceforth operate as a division of the Fyr-Fyter Company of Dayton, Ohio.

Pressurized Water-Type Extinguisher

The General Pacific Corporation, 1501 East Washington Boulevard, Los Angeles 21, California, and the General Detroit Corporation, 2272 East Jefferson Avenue, Detroit 7, Michigan, have announced a non-inverting, pressurized water-type extinguisher called the General Quick Aid Water-Type Fire Guard. The extinguisher features a squeeze grip control and a rip puncture pin for insuring discharge. The charge consists of plain water and a pressurized CO_2 cartridge for recharging. All parts are removable as a single unit since the operation lever, carrying handle, discharge tube and CO_2 cartridge are all attached to the head assembly. The extinguisher has been listed by Underwriters Laboratories, Inc. Further details may be obtained from the manufacturers at the above addresses.

●

Dry Chemical Portable Fire Extinguisher

Walter Kidde and Co., Inc., has announced the development of a new 5-lb. dry chemical portable fire extinguisher. The new unit has the same diffusion discharge pattern contained on the company's 20- and 30-lb. models. The cloud pattern has a range of 5 to 7 ft. The extinguisher features trigger-type finger control and a built-in gage which shows the exact pressure carried. If the reading on this gage shows below 150 lbs., the unit can be charged with compressed air on a gas station or factory air line. Fully loaded the extinguisher weighs only 10 lbs., stands 15 ins. high and is 4½ ins. in diameter.

There Is A DARLEY CHAMPION for Every City and Rural Fire Service

500 GALLON UNDERWRITER PERFORMANCE PLUS HIGH PRESSURE FOG

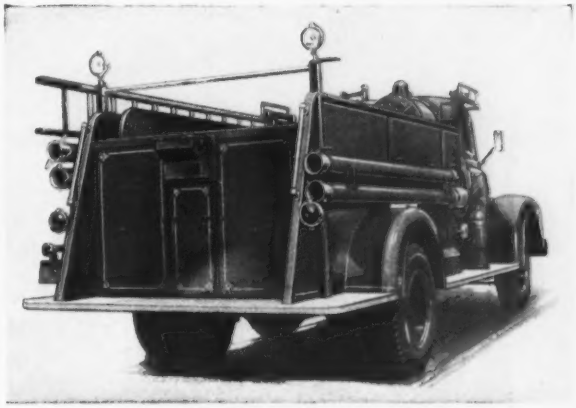
A highly efficient pumper apparatus with the Champion Three Stage Centrifugal Pump powered by the 1951 International. The Pump is the Type SH500 which delivers 500 gallon Underwriter performance plus 60 gallons per minute at 850 lbs. for high pressure fog.

Or this Darley Apparatus is also available in Underwriter capacities of 600 GPM and 750 GPM — modern commercial truck motors having adequate power for the larger capacity pumps.

Booster Tank: 800 gallon flat type with quick action rear fill and special line piped from pump to tank for refilling tank by pumping at draft.

Booster Hose Reels: Two with horizontal and vertical guide rollers so that hose can be pulled off quickly and easily in any direction without rubbing or binding anywhere.

Compartments: Roomy and adequate for safe, convenient storage of equipment.



Write for Fire Apparatus Booklet

High Pressure Fog Pumps

W. S. DARLEY & CO. Chicago 12

ESTABLISHED 1908

Front and Midship Pumps

Manila AGAIN PREFERS GAMEWELL

Manila, the capital city of the Philippines, first installed a Gamewell fire alarm system in 1903.

This system, from time to time extended with Gamewell equipment, was completely destroyed during the recent war.

After more than 40 years experience, Manila again purchased a complete fire alarm system consisting of a 38 circuit central station, 14 fire station alarm and recording equipments, and 600 fire alarm boxes. The new system has recently been placed in operation.

TRADE MARK GAMEWELL REG U.S. PAT. OFF.

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

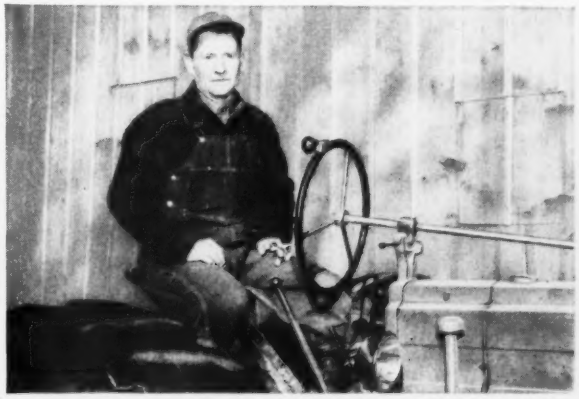
In Canada: Northern Electric Co., Ltd., Belleville, Ontario

VIRDEN HAS CONFIDENCE IN A GREAT FIRE-FIGHTING TEAM

Fire-fighting history is being made in southern Illinois by a great fire-fighting team—the Virden Volunteer Fire Department and the John Bean High-pressure Fog Fire Fighter. To provide fire protection for the home community of 3,000 inhabitants, a nearby village of 1,000, and a surrounding rural area of 650 farms, Chief Albert M. Fuiten relies heavily upon the John Bean Fog Fire Fighter, purchased in 1949.

"The Fog Fire Fighter goes to every fire and we send our 500-gallon pumper where water is available," Chief Fuiten says. "However, most of the fires are put out by the high-pressure fog before the pumper has water in its lines."

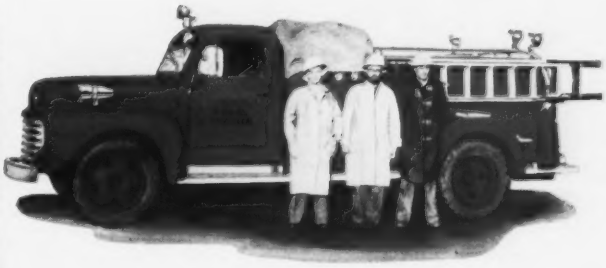
Below are three examples of John Bean efficiency:



1. Roy Claussen, Virden farmer, on the tractor that caught fire as it was being refueled from a 300-gallon gas tank. The Bean Fire Fighter came three miles, stopped the roaring spill fire saving the tractor and all buildings.

2. Louis A. Hoeflin and Charles E. Jones, co-owners of the Virden RECORDER, back at work after Bean high-pressure fog had knocked out a raging fire in their pressroom. Only *15 gallons* of water were needed to bring the fire under control.

3. "I wouldn't have given a dime for the chances of saving my farm home when the Virden fire truck pulled into the yard," the owner declared. Amazing John Bean high-pressure fog not only saved the home, but water damage was so slight the family moved back in the same day.



Key figures in Virden's Volunteer Fire Department are (left to right): Chief Albert M. Fuiten, Assistant Chief Oliver Dodd, Assistant Chief Charles T. Smith, AND Virden's John Bean High-pressure Fog Fire Fighter. The first year the John Bean truck was in service, Virden's 27 fires were held to only $2,000 damage.

Your community, too, deserves—and can have—this dependable protection. Write today for information.

John Bean Division
Dept. 127
Lansing 4, Michigan

JOHN fmc BEAN

John Bean Division
426 Julian Street
San Jose, California

ORIGINAL HIGH-PRESSURE FOG FIRE FIGHTER

Can be mounted on most standard truck chassis

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION

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This Book Can Save Lives in Your Community!

Use It in Your Fire Prevention Activities

This publication should be distributed to every home owner by members of the fire service. It contains vital information of procedures to follow for home fire safety.

"Preventing Home Fires" describes step-by-step practices that lead to safety from fire. Dramatic pictures show what happens when such safe practices are neglected. The contents are easy to read, yet forcefully emphasize the urgent need for fire safety in the home.

You are aware that fire occurs in approximately 330,000 homes each year. An average of 5,000 persons are killed and many thousands injured in these needless fire incidents. Every member of the fire service realizes the importance of minimizing these fire losses through year-round fire prevention activities.

The fire chiefs of the United States and Canada, through the International Association of Fire Chiefs, have pledged united support to a campaign to raise the level of fire safety in the home. Members of fire service cooperating with that campaign can make good use of "Preventing Home Fires." Its distribution will not only be a means of bettering public relations but can also be a factor in saving lives from fire in your community.

Twenty-five cents per copy. 24 pages. Amply illustrated. Generous discounts for quantity purchases.

This publication contains information on: common-sense smoking hints; fundamentals of safe wiring; care and use of electrical appliances; elimination of flammable liquid hazards; safety precautions for all types of space heaters and stoves; requirements for fire-safe furnaces and chimneys; fireplaces; incinerators; fire-safe housekeeping; instruction of children in fire safety; and what to do in case of fire.

Write today to the NFPA, or use this convenient order form.

NATIONAL FIRE PROTECTION ASSOCIATION, 60 Batterymarch Street, Boston 10, Massachusetts. F-3-52

Please send me ..... copies of "Preventing Home Fires."

Name .....

Street .....

City ..... **State** .....

☐ **Check for $..... is enclosed.**
☐ **Please send bill.**